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## Visceral Geographies of Household Sustainability: How Kitchen Caddies Construct (and are Constructed by) Meanings and Practices of Food Waste and Consumption

Elloise R. Ames

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## Abstract

Confronted with the economic and environmental costs of food waste, municipal-composting programs have proliferated. Some programs, (like Kiama Municipal Council's 'Ok Organics'), provide households with a 'kitchen caddy' to separate food waste that is to be collected by the council and composted. Such strategies bring residents face-to-face with food waste as they separate this food from other waste streams. Embodied research methods suggest encounters with both bins and waste, although 'ordinary' objects, can move people to re-consider their relationship to waste (Hawkins, 2005; Waitt & Phillips, 2016). Despite this, we have little sense of how the caddy, and contact with food waste, shapes such reflection and/or triggers new environmental subjectivities (Evans, 2012b; Metcalfe et al., 2012). Drawing on the case of Kiama Council's waste program, this project addresses this gap. Through analysis of 15 semi-structured interviews, the research shows that the caddy's presence including its sight, smell and decay, disrupted households, causing participants to develop strategies to regain control over their home space. While the caddy triggered slight changes towards more sustainable behaviour and alleviated the widely-felt pressures to be 'environmental', close encounters with food waste have not led to the revision of consumption and waste practices in more sustainable ways. Although, notably it is understanding pre-caddy histories that we can see participants had already formed, or were forming, insights into how they relate to waste, therefore already minimising waste in numerous innovative ways (e.g. composting and repurposing). This study suggests future waste minimisation policies support households in further managing of the inevitable visceralities of food waste.

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How Kitchen Caddies Construct (and are  
Constructed by) Meanings and Practices of Food  
Waste and Consumption

**Elloise R. Ames**

Supervisor: Dr Nicole Cook

2018

The information in this thesis is entirely the result of investigations conducted by the author, unless otherwise acknowledged, and has not been submitted in part, or otherwise, for any other degree or qualification.

Elmes 29/10/18

## Abstract

Confronted with the economic and environmental costs of food waste, municipal-composting programs have proliferated. Some programs, (like Kiama Municipal Council's 'Ok Organics'), provide households with a 'kitchen caddy' to separate food waste that is to be collected by the council and composted. Such strategies bring residents face-to-face with food waste as they separate this food from other waste streams. Embodied research methods suggest encounters with both bins and waste, although 'ordinary' objects, can move people to re-consider their relationship to waste (Hawkins, 2005; Waitt & Phillips, 2016). Despite this, we have little sense of how the caddy, and contact with food waste, shapes such reflection and/or triggers new environmental subjectivities (Evans, 2012b; Metcalfe *et al.*, 2012). Drawing on the case of Kiama Council's waste program, this project addresses this gap. Through analysis of 15 semi-structured interviews, the research shows that the caddy's presence including its sight, smell and decay, disrupted households, causing participants to develop strategies to regain control over their home space. While the caddy triggered slight changes towards more sustainable behaviour and alleviated the widely-felt pressures to be 'environmental', close encounters with food waste have not led to the revision of consumption and waste practices in more sustainable ways. Although, notably it is understanding pre-caddy histories that we can see participants had already formed, or were forming, insights into how they relate to waste, therefore already minimising waste in numerous innovative ways (e.g. composting and repurposing). This study suggests future waste minimisation policies support households in further managing of the inevitable visceralities of food waste.

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## Chapter 1: Introduction

The world has seen an increase in waste minimisation policies, targeting both corporations and consumers (Bulkeley & Gregson, 2009). Within these policies, food waste has attracted particular attention. For instance, The Australian Government's National Food Waste Strategy is an impressive attempt to halve food waste by the year 2030. This will be done by means of policy making, supporting businesses to minimise waste, repurposing food; and changing consumer behaviour (Commonwealth of Australia, 2017). Such policies have emerged due to international concerns of landfill, greenhouse gas emissions and global warming, amongst a myriad of others (Watson & Meah, 2013). For government agencies, it is often landfill specifically which brings about both environmental concerns (through methane emitted by food as it decomposes); and economic concerns (from the cost of maintaining and expanding sites in cities and regions) (Bulkeley & Gregson, 2009; Sharp *et al.*, 2010). While edible food is lost throughout many stages of the food production process, a large proportion of food waste can be linked to the everyday practices within the home (Evans, 2012a; Metcalfe *et al.*, 2012). On this, the United States food waste non-profit organisation, ReFed, estimates that 43% of food waste is generated in households (ReFed, 2018). As Evans (2012a) suggests however, the generation of food waste at home is often not the result of unsustainable actions, but rather unplanned events, maintaining family relationships, and health concerns – leading to food being unintentionally wasted. This begs the question: what are the contributing factors in everyday practices which lead to unnecessary 'binning' and 'ridding' of food at home?

It could be suggested that without the push from government agencies, non-government organisations and volunteer operations, households would be less inclined to shift their waste practices (Hawkins, 2005). For instance, the 'Love Food Hate Waste' campaign adopted in Australia and developed in the United Kingdom (UK) is a government-run solution to reduce food waste in households. This is achieved by means of education on the complex social, economic and environmental problems of food waste (NSW Environmental Protection Authority, 2016). As boldly suggested by Hawkins (2005), political frameworks often are blind to the implications of bodies, ethics and materiality of waste and how these factors can influence decision making. Therefore, the dynamic workings and lifestyles of a household (and visceral responses of residents to food waste)

may be overlooked in shaping waste practices at home. Without regard for consumer experiences and relationship to food waste, policy approaches tend to be considered ‘weak’ (Mourad, 2016). Yet, for successful food waste policies, it is vital not only to promote behavioural change but also acknowledge the discomforts of waste.

According to Hawkins (2005), people change their waste practices when they are compelled to do so through local policies and infrastructure provision. She suggests this occurs commonly with a shift in local waste services, punitive actions and fines. With the intent to minimise food waste going to landfill and improving resource recovery, Kiama Municipal Council, in New South Wales (NSW), is one of the few local councils in Australia that is collecting and repurposing food waste from homes (Commonwealth of Australia, 2017; Kiama Municipal Council, 2017). They have done this by providing all households with a 7-litre kitchen caddy (waste receptacle) (seen in Figure 1) which is used with the objective of separating organic household waste (particularly food waste) from the general waste streams. The caddy is specifically designed to be kept on the kitchen benchtop or secured in a cupboard. Notably, the leading reason why Kiama Council initiated their waste minimisation program was to resolve the issue of the local landfill reaching capacity and the excessive costs of diverting waste to landfill outside the municipality. According to the current evaluation report of the program, named ‘Ok Organics’ (Kiama Municipal Council, 2017), the new waste services aimed to reduce the costs of Domestic Waste Management, whilst also minimising greenhouse gas emissions.



**Figure 1: An example of a council-provided kitchen caddy for organic waste**

The council introduced their 'Ok Organics' waste minimisation program through a trial in 2012 in a small residential zone of the municipality. The program was initially funded by the NSW Environment Protection Authority (EPA), but now funding is entirely tied into the domestic waste residential charges (Kiama Municipal Council, 2017). After the progress of introducing the program to various residential zones two-at-a-time, the entire municipality were incorporated from July 2016 (Kiama Municipal Council, 2017). Significantly, it is not required that residents of Kiama Municipality use the 'Ok Organics' system. However, the Council have modified their waste collection services to accommodate the organics bin. Currently, the organics bin is collected every week and general garbage and recycling is collected on alternative fortnights (Kiama Municipal Council, 2017). This has encouraged residents to use the program, and potentially trigger new subjectivities and practices of waste management (Hawkins, 2005). Through the

efforts of educational workshops and shop-front information kiosks, the results of the program have seen a 40% decrease of waste to landfill (based on previous disposal data); an increase of recycling and resource rates, now reaching the NSW target of 75%; and less than 2% organic bin contamination. These efforts have meant the reduction to disposal costs and increase to environmental outcomes (Kiama Municipal Council, 2017).

Although Kiama Council has seen remarkable success, in the first years of its programs, many residents were experiencing difficulty dealing with the hands-on aspect of waste management. To deal with this, the council allowed specific brands of compostable caddy liners to be used. These liners are made of starches and vegetable oils, allowing them to completely break down in a timely manner (Kiama Municipal Council, 2017). When the green organics bin is collected, its content is taken to Soilco Pty Ltd, based in the nearby suburb of Kembla Grange, NSW (Kiama Municipal Council, 2017). There, the food waste and other organic material is processed into compost using centralised composting techniques and treatments (Lundie & Peters, 2005). The council has encouraged the use of the 'Ok Organics' services by providing free compost to households at various times in the year. With the compost which is made, Soilco retain and sell-on 90%, and Kiama Council use the other 10% for the purpose of these 'give-aways' as well as grounds and parks maintenance (Kiama Municipal Council, 2017).

The implementation of the kitchen caddy into homes is significant as it forces people to come face-to-face with their waste. Hawkins (2001) suggests that when waste is transported away from the home and into the hands of the public sector, waste services and management networks; its visceralities and 'secrets' are kept out-of-sight and out-of-mind of households. By introducing the kitchen caddy, households need to separate, store and handle food waste as a distinctive 'category' of waste. As Waitt and Phillips (2016) suggest, designating food as waste is an ongoing process as residents are involved in determining when and why food becomes inedible or binnable. The location of the kitchen caddy in the home, potentially urges households to take responsibility of food waste and to keep it in sight. However, what is not understood from the Ok Organics program is what occurs at home as residents come into further contact with the visceralities and 'secrets' of food, and if and how the management of food waste through the kitchen caddy has been disruptive.

These questions are important because waste can be confronting. People may feel a sense of disgust or repulsion towards waste (Hawkins, 2005) and this embodied response may shape whether or not they engage with the program. If residents are ultimately disgusted by the caddy and its contents, the program may be unsuccessful. On the other hand, engaging with food at different points of decay may generate new understandings of food waste, compelling residents to innovate their consumption practices (shopping, cooking and eating) in more sustainable ways (Turner, 2018). Rather than resisting the process of food-becoming-waste, the close encounters in and with food waste could drive deeper environmental practices and subjectivities. Whether and how residents' embodied encounters with the kitchen caddy and its contents shape new subjectivities and household waste and consumption practices is so far, unclear. Drawing on 15 home-visits with residents in Kiama municipality, this thesis aims to address this gap.

### 1.1. Aims and Key Questions

The aim of this study is to better understand whether and how the introduction of the kitchen caddy, and participants embodied encounters with the caddy and food as it is designated to the caddy, shapes households' consumption and waste practices. To throw light on this issue, the study will address the following research questions, in specific relation to the active 'Ok Organics' program led by Kiama Council:

1. To what extent do embodied encounters with food waste and the kitchen caddy shape household engagement with municipal composting?
2. To what extent are household consumption practices influenced and/or altered through embodied encounters with food waste and kitchen caddy use?
3. In what ways do embodied encounters with food waste and kitchen caddies shape environmental subjectivities?

### 1.2. Structure of the Thesis

The remainder of the thesis progresses as follows. Chapter 2 develops a literature review drawing on studies of waste in human and cultural geography, including a focus on embodied engagements with waste and emerging research on the agency of the bin. This will be done by specifically drawing on the research which explores consumer culture and the human relations to waste (e.g. Gregson *et al.*, 2007; Evans, 2012a). The embodied

encounters will be addressed by examining studies which directly investigate visceralities of food waste, paying particular attention to the more-than-human aspects and influences of this waste. This is established in studies conducted by researchers in the likes of Hawkins (2005), Waitt & Phillips (2016) and Turner (2018). Finally, the agency of the household bin, kerbside bin and kitchen caddy will be considered through the achievements of scholars such as Chappells & Shove (1999), Metcalfe *et al.*, (2012), and Evans (2012b). Acknowledging the current literature in this topic is imperative when concerning the success of municipal programs and potentially developing deeper environmental subjectivities. Chapter 3 sets out the method through which these themes are explored, highlighting the value of home visits and caddy inspections in developing an understanding of household food consumption and waste practices.

Chapter 4, the first of three empirical and analytical chapters, examines whether the introduction of the kitchen caddy changed the ways residents perceived and related to food waste, as ‘out-of-sight, out-of-mind’, ‘as a concern’ or ‘as a resource’. This chapter emphasises both the diversity of relationships households have with food waste and the ways in which the kitchen caddy, and participation in the Ok Organics program, provided relief for residents concerned about the environmental impacts of food distributed to landfill. Chapter 5 focuses explicitly on embodied responses to food waste and the caddy. It shows that residents were moved by the caddy and food waste, but this did not trigger new environmental subjectivities. Rather it stimulated new practice of ‘display’, cleaning and containment of the caddy and food waste. Chapter 6 explores the impact of the caddy and food waste on consumption practices. Finally, Chapter 7 draws out the key conclusions, highlighting the work that households must do in managing the ‘yuck factor’ as a key component in Kiama’s composting scheme; and in sustainable transition more broadly.

## Chapter 2: Literature Review

To understand shifting meanings of food waste and consumption, along with binning and ridding rituals and potential embodied encounters, this chapter first explores the relationships between households and their waste (Gregson *et al.*, 2007a; Evans, 2011). Second, it examines cultural geographical literature exploring food waste, viscosity and materiality managed in the home (Evans, 2014; Waitt & Phillips, 2016). Finally, it explores an emerging body of research around the agency of the ‘bin’.

### 2.1. Geographies of Waste

Waste is a part of our everyday lives, and our relationship with waste is ever changing (Hawkins, 2005). Although waste is produced in all stages of the production and consumption of food, households have a significant role to play in reducing waste. According to Foodwise (2018), up to 40% of the general household bin content in Australia is made up of food. The notion that households and individuals are expected to solve waste concerns themselves has been challenged by Evans (2011) who interrogates the limitations of policies and programs that blame the consumer. This fundamental study draws on the work of Ioannou (2005) to highlight how ‘knowledge-attitude-behaviour’ approaches cannot fully take into consideration the dynamics of everyday life (Evans, 2011). Evans further draws on the structuration theory of Giddens (1984) to call attention to the social structure of the household in understanding how mundane practices (i.e. eating) are moulded into our routine and flow of life (Evans, 2011).

To develop and understand how the complex social dynamics and priorities of the home can impact waste practices, Evans (2011, 2012a) used ethnography in the form of a mixed method approach with 19 households incorporating semi-structured interviews, participant diaries, and observations. These observations were used to reflect on participant behaviours and actions during a go-along of grocery shopping, food preparations, cupboard searches, fridge cleans and home tours (Evans, 2011). Reflecting on the framework of his paper, Evans (2011) draws on Shove’s (2010) work on the ABC’s of climate change policies. These being ‘attitude, behaviour and choice’, which has been developed from an aspect of ‘psychological literature grounded in theories of planned behaviours’ (Ajzen, 1991; Shove, 2010: 1274). Shove explores how this ideology is flawed when it comes to constructing policies regarding consumer behaviour, as the entire



responsibility is placed on the individual or household. The policy framework places governments as an enabler of pro-environmental movements, insinuating that individuals and households are incapable of making sustainable changes for themselves (Shove, 2010). From this, Evans (2011) suggest an approach to sustainable consumption and behaviour change has surfaced which revolves around a sociological standpoint. This sociological standpoint frames his work, and further argues that individuals and households should not be the sole target of sustainable consumption policies. Further debated, Waitt *et al.*, (2012) explain that such policies imply people are ‘passive consumers’ (:53) rather than active citizens of society, and such approaches can be deemed as unsuitable for promoting behavioural change for environmental purposes.

In his work, Evans (2011, 2012a) suggests that the blame of consumerism is inappropriately given to individuals and households. This is projected through the many programs and interventions which fail to recognise the dynamic and complex context of everyday life (e.g. living arrangement, household type, work/leisure commitments, travelling, social relations etc.) – where consumption and disposal is an ordinary component in domestic practices (Evans, 2012a). In analysis of the data, Evans reveals that participants did not have a disregard for food that they wasted, rather all respondents held strong feelings of discomfort to the act of wasting. Recognising the diverse factors shaping household waste practices, Evans *et al.*, (2017) call for stronger governance of sustainable consumption by municipal and other authorities, in order to move beyond approaches which only focus on attitudes, choices and responsibilities of the household.

Similar to these themes, Gregson *et al.*, (2007a) – who target the act of ridding and binning – challenge the idea that households mindlessly consume and rid unwanted goods once they are no longer needed. The study unsettles the myth that we live in a throwaway society (Miller, 1995; Evans, 2014). Through multiple interviews of 97 households within the period of 2 years, their study sought to understand the act of discarding. These interviews were attentive to the items which households deemed binnable and in turn, explored the stories behind why they were rid. Gregson *et al.*, (2007a) discuss how the objects reflected upon within these homes were often associated with an individual’s or household’s identity. They also discuss that often these items which once reflected an individual’s identity (e.g. ‘a nice clock’) may no longer do so at a given point, resulting in it being binned or passed along (Gregson *et al.*, 2007a). Binning items which once may have been valuable or central in the construction of identity – Gregson *et al.*, (2007a)

suggests – reflected the desire to live with a minimalist design, and without clutter. This concept of clutter in the home is explored by Dowling (2008), where a notable connection can be made between perceptions of home-making, ideals of a ‘good home’ and waste practices.

In their study, Gregson *et al.*, (2007a) make clear that various misconceptions of consumerism were made about the home. It is suggested for instance, that acts of consumption are not just about purchasing and using things (Evans, 2014) but about ‘sorting, holding and keeping and ridding as well’ (Gregson, 2007: 19; Evans, 2014). These practices hold value to households and individuals, suggesting that items and objects are not thrown away without consideration. Even though these are valued practices, it is debated that surplus things will often still be binned in the landfill waste stream (Gregson *et al.*, 2007a; Evans, 2014). As suggested by Evans (2014), food can slip quickly into this category of excess by being: unwanted/forgotten; a result of previous experiences managing viscosity; and/or by being an attempt to prevent food related health issues. Therefore, even before it has been placed into a conduit of waste, it has a selected future.

## 2.2. Embodied Encounters

With the dealings of waste comes its affects, often sparking embodied relations through common viscerality such as sight, smell, touch and vermin (Waite & Phillips, 2016). Hawkins (2005) investigates the way waste is ‘implicated in embodiment and styles of self’. As she suggests, the idea of waste historically has been perceived as a danger to one’s self (Douglas, 1966). However, she also critiques this perception suggesting it does not allow an understanding of how ideas of waste change and shift in our everyday lives and over time. Instead, it is proposed that waste does not just threaten the self, but it establishes how we define our ethics, behaviours and obligations more broadly. For Hawkins (2005) it is through embodied encounters with the materiality of waste, and how we organise our self and our environment around it – that helps to keep chaos at bay.

Studies of waste by Hawkins (e.g. 2001, 2005), build on the work of Douglas (1966), who conceptualises waste as ‘matter out of place’. Douglas explains that the rituals of waste are formulated into cultural and symbolic meanings which are controlled by order and cleanliness. For instance, when waste is taken away from homes, its significance is

generally forgotten (Hawkins, 2001). She argues that when collected and stored in the public domain (i.e. underground or in landfill), it can facilitate denial of waste production and prohibit changes to waste habits. However, when people come face-to-face with their waste, in a visceral way, she claims this experience has the potential to trigger new ways of relating to waste, inspiring action (Hawkins, 2005).

Such embodied encounters can break-down anthropocentric ways of relating to food, and food waste. Turner (2018) characterises anthropocentric relations with food and food waste in terms of ‘fractured ecological perspectives that perpetuate destructive, wasteful behaviours’ (:1). Turner also describes this as ‘human exceptionalism’, simply meaning the human separation from life systems which make life possible (e.g. food or waste). However, through experimental engagements (with ‘excess food’), she suggests that food-producing gardeners can become more aware of their dependencies and ‘entanglements’ with other life systems, for instance by experimenting with new recipes or ways of cooking. It is through ‘bodily engagements where the very vitality of food is inescapable’ that gardeners become aware of ‘mutual vulnerabilities in living together’ (Turner, 2018: 1). She also suggests that through these experiments, gardeners develop skills more suited to ‘uncertain futures.’ Participation in food-producing gardening at home – and contact with waste – can further influence other habits of waste reduction (e.g. eating seasonally and eating what is on hand). Turner (2018) suggests overall, that we must move away from ‘old humanism’, to a future which acknowledges the challenges of living with more-than-human entities (Gibson-Graham, 2014).

Throughout this work, Turner (2018) emphasises the significance of the materiality and viscosity of food waste in facilitating such changes. Through in-depth interviews and analysis of participant diaries with 39 food-producing-gardeners and alternative food network (AFN) participants, the research determined that most participants wanted to avoid throwing food away motivated by their hate of food waste. In her research, Turner (2018) pays attention to viscerality of the more-than-human entities which have the potential to affect waste practices. This being the materiality of decomposing foods (look, smell and taste). She shows that participants were ‘moved’ by food through their interactions of buying and growing food. According to Turner (2018), these interactions inspired participants to experiment with food which may become waste in order to preserve it (e.g. testing various recipes and/or big batch cooking). Some participants were engaged in these activities so thoroughly that the mere contact with the more-than-human

uncertainties, encouraged waste avoidance (Turner, 2018). For instance, after a garden harvest, the ‘visceral delight’ (Turner, 2018: 9) of the foods encouraged them to immediately carry out its preservation (i.e. batch cooking). In turn, it was suggested that households came to appreciate the materiality of waste and enjoyed being moved by visceral and embodied encounters. Interestingly, these occasions of being ‘moved’ by food unsettled the hard boundaries between human and environmental worlds, developing a more-than-human sensibility; and lead to a minimisation of food waste, and increased opportunities for alternative solutions to binning (repurposing).

While Turner links visceral encounters to new practices of repurposing excess food, Waitt and Phillips (2016) explore how such embodied encounters contribute to the designation of food as waste and how such designation contributes to the development of subjectivities and social relations of care. Following Hawkins (2005), and Douglas (1966), waste does not only embody social order, in fact it is the force and matter of waste which cooperate in its creation, placement and ridding (Waitt & Phillips, 2016). This is acknowledged by Waitt and Phillips (2016) who suggest that food waste practices are a product of disgust and anxiety brought upon by consumer culture and food waste practices. They argue that ‘affective responses’ to the materialities of waste are of crucial importance in understanding how food comes to be designated as waste. Waitt and Phillips (2016) refer to ‘food-becoming-waste’ to capture this ongoing process. They draw on geographical studies that foreground ‘matters of the body’ and everyday practices of food waste that highlight visceral responses and ‘gut reactions’ (Probyn, 2000). They suggest, like Hawkins (2005), that these embodied sensations provide significant clues to understanding how we dwell – and rethink ourselves in – the world (Waitt & Phillips, 2016). Through this, the ‘gut reaction’ or ‘yuck factor’, and anxiety about the act of wasting food, are of significant importance in understanding food waste and refrigeration. ‘Gut reactions’ have been identified in sustaining other types of consumption. Stanes and Gibson (2017) for instance, reveal how embodied reactions to polyester clothing occur during its everyday wear, connecting consumers to its meaning/creation history and feel; shaping how it is handled and wasted; and illuminating its associated social, cultural and environmental values. Together these papers reveal the importance of visceral and material approaches in understanding how things, including food, come to be designated as waste.

Connected to visceral and material approaches in studying consumption and waste, is an emerging set of research about the use and perceptions of the household bin – and more specifically the kitchen caddy, explored next.

### 2.3. The Agency of the Bin

The bin and its implications for household waste practices are an emerging area of research in relation to food waste. Similar to research on the implications of food waste and the refrigerator (Waitt & Phillips, 2016), the kitchen caddy – as an object of disposal – has the potential to bring about disgust and anxiety from hygiene concerns and disruptive circumstances (e.g. smell, sight and vermin) (Metcalf *et al.*, 2012). In their work, Metcalfe *et al.*, (2012) found that despite some reluctancies, the presence of the kitchen caddy forced participants to recycle their waste; and sparked greater environmental consciousness among participants.

Kitchen caddies have been designed to be placed in a convenient location within a kitchen (Metcalf *et al.*, 2012). However, the smell and aesthetics associated with the caddy can disrupt a household's sense of cleanliness, space and order (Evans, 2012b; Metcalfe *et al.*, 2012). This can potentially lead people to bypass using and interacting with the kitchen caddy. When discussing themes of cleanliness regarding the caddy, ideals of home and home-making are often also disrupted. The concept of household clutter is presented by Dowling (2008) in her paper regarding open-plan living in Australia – connecting its hinderances (clutter being 'messy' and 'intrusive' (:540)) and benefits in home-making. Importantly, Dowling (2008) also tries to understand how unavoidable clutter (e.g. from children) is managed in the modern home. In this, it is also suggested that rooms are 'governed by norms, values, expectations and rules' (:539) that prioritise minimalist design and uncluttered spaces. Depending on the room of the home, certain objects (including bins) are accepted or rejected.

These themes of clutter relate to ideas of the disruptions a kitchen caddy can make in homes (e.g. relating to cleanliness and order), suggested by Evans (2012b) and Metcalfe *et al.*, (2012). However, it is the work of Bulkeley and Gregson (2009) that addresses the kitchen caddy specifically as an item of clutter. Connecting back to the idea of home-making presented by Dowling (2008) above, Bulkeley and Gregson (2009) claim that storing waste in the home is disruptive to ideas of cleanliness and order, and is a practice

which may bring about negative sensitivities to household values, leading to the belief of having a ‘messy home’. These ideas of order and cleanliness associated with the caddy are also discussed by Evans (2012b). It is in his study of binning, gifting and recovery – where Evans has specifically looked at ‘moving things along’ after they have been used or unwanted – that we are introduced to the kitchen caddy as a relatively *new* household binning technique.

In his research, Evans (2012b) used ethnographic study to build on the work of Gregson (2007), Hetherington (2004) and Munro (1995) , and on the conduits that exist to aid moving things along. His study includes the in-depth examination of 19 households from two streets within the UK, and the methods used of disposing food waste. It is acknowledged that the use of the kitchen caddy for municipal organic waste is an innovation allowing foods that ‘slip’ into surplus, to still have a purpose through the processes of recycling. Household use of the kitchen caddy including how households deal with the embodied encounters of waste and its material forms, is crucial to develop policies and programs redirecting waste from landfill to other uses such as composting.

Previous literature explored in this review has discussed whether the household bin (i.e. kitchen caddy) has influenced practices of binning and ridding food waste, as well as influences on consumption (Evans, 2012b; Metcalfe *et al.*, 2012). However, through history, the innovation of specific types of bins (e.g. the ‘wheelie bin’) have played a role in the amount of food being wasted (Chappells & Shove, 1999). Over-time, as cities struggle to accommodate waste, more focus has been placed on waste minimisation and the distribution of responsibilities of waste management between the household and authorities. For example, the introduction of new bin technologies, has seen a growth in public sector responsibility of dealing with domestic waste, and a decline in the household responsibility of dealing with waste (Chappells & Shove, 1999). By using textual analysis of previous studies, Chappells and Shove (1999) show how the changing meaning of waste, practices and responsibilities are connected to one’s relationship with the bin.

In their study, Chappells and Shove (1999) like Hawkins (2005), suggest that garbage typically is kept out of sight, but even so, it can hold moral status or value. When discussing the values and non-values of waste, Chappells and Shove discuss Thompson’s (1979) ‘Rubbish Theory’. Thompson details that: in order to understand changing values of garbage we must acknowledge, the shifting relations to waste, and the ability and/or

inability to disregard objects of possession (Thompson, 1979; Chappells & Shove, 1999). These discussed themes are similar to research undertaken by Gregson (2007a), specifically when understanding disregarded objects which did/do hold value or represent one's identity. Additionally, it is suggested that moral values are placed on bins in particular (even if they are kept out of sight), as they are an agency and icon of environmental responsibility. The presence of a bin may cause individuals and households to be more wary of their recycling habits, and therefore the object itself holds moral value (Chappells & Shove, 1999).

Chappells and Shove (1999) also explore the significance of the bin's design. Notably, they describe the bin as a being a scripted object with 'rules of binning behaviours inscribed in its shape, size and form' (:270). For example, during the introduction of the wheelie bin in the UK, the quality and quantity of food waste shifted. This may have been specifically because of the bins size and functionality. Interestingly, Chappells and Shove (1999) discuss the historical ideas around bin design where they were designed with the intention for collection and handling purposes of greater efficiency (i.e. size and shape), rather than designed to create visually pleasing aesthetics. Connecting this with the kitchen caddy, Metcalfe *et al.*, (2012) suggests that the construction, colour and functional design of the caddy is considered displeasing to some households, and often something which people do not want others to see. With this, the kitchen caddy, general bin, and food waste in a space which has controlled cleanliness and order, can all become representative of 'matter out of place', and have the potential to cause disruptions to everyday practices and households (Douglas, 1966; Metcalfe *et al.*, 2012).

## 2.4. Conclusion

Together these three bodies of literature help to understand consumption, waste and the limits of conceptualisations of the 'throwaway society' (Gregson *et al.*, 2007a; Evans, 2011). They also foreground the affects and implications of embodied reactions to the visceralities and materialities of food waste (Hawkins, 2005; Waitt & Phillips, 2016; Turner, 2018); and the agency of the household bin and kitchen caddy (Chappells & Shove, 1999; Evans, 2012b; Metcalfe *et al.*, 2012). While recent research provides insights into the ways in which food becomes designated as waste; and how food waste and the kitchen caddy are entangled with ideals of modern homes and come to represent particular values, the relations between the caddy, its content (food waste), aesthetics and

sustainable practice and subjectivities is less well considered. While the bin clearly triggers emotions and practices associated with binning and ridding (Evans, 2012b; Metcalfe *et al.*, 2012) it is much less clear whether and how the process of separating, storing and encountering food waste could generate deeper attunement to the ‘shared vulnerabilities’ observed by Turner (2018); or to more sustainable approaches. To address this gap, the next chapter sets out a method to better understand what happens in the homes of those who actively use the kitchen caddy – specifically whether their practices of consumption and waste are influenced with active use, and how specific embodied encounters with food waste can impact environmental and other subjectivities.



## Chapter 3: Methodology

With the current concerns of household food waste going to landfill, this research aims to investigate whether and how the caddy and the process of separating food from other types of waste disrupts and changes everyday food consumption and waste practices. As the average household in Australia has up to 40% of its garbage content as food (FoodWise, 2018), understanding how the kitchen caddy is incorporated into household practices, including waste practices, is important in developing effective waste minimisation policies. The method builds on research that explores sustainability from the perspective of households. In their research on everyday sustainabilities for instance, Gibson *et al.*, (2011) explore the dilemmas of being sustainable at home; and discuss the numerous factors and negotiations that underpin pro-environmental practices. Such practices are often motivated by non-environmental concerns, such as financial or familial and social relationships. This thesis aims to build on this work, by focusing on what happens at home as sustainable infrastructures (kitchen caddies) are rolled out. Building on insights from cultural geography, the research asks if through encountering food waste more routinely by using the caddy, residents begin to develop new, and potentially more sustainable approaches to food consumption and waste. Before examining this approach, this chapter sets out the recruitment and sampling process

### 3.1. Recruitment and Sample

To develop a sample for this study, participants in municipal composting were sought. In Australia, only around 10% of local councils offer a centralised composting service (Australian Broadcasting Corporation, 2017). Kiama City Council, on NSW coast south of Wollongong, was selected as the target municipality due its proximity and the researcher's previous work with the council. Participants were gathered in two ways: 1) through posting multiple advertisements on the 'Kiama Community Page' of the social media platform, Facebook; and 2) through attendance of a cooking class hosted by Food Fairness Illawarra at Kiama. By doing this I aimed to attract a wide demographic of participants, potentially resulting in a range of ages, dwelling types, experiences and opinions surrounding the kitchen caddy. Notably, the majority of participants were women aged 50 years or older. The sample size was then compared to the socio-economic profile of the Local Government Area (LGA) of Kiama (Australian Bureau of Statistics,

2017). According to the 2016 census, Kiama LGA was made up of 51% females (avg. age 55-59) and 49% males (avg. age 60-64). Comparing to the studies sample size, it could be suggested that participants were more likely to be women (87%). The majority of the LGA citizens were Australian born (79.4%), were living in a household family composition (76%), and in a separate dwelling (78.5%). Evidently, on matters of birth, family composition and dwelling type, the profile is representative of the recruited participants.

To better understand the institutional context of the 'OK Organics' program, its success and improvements, I attended a meeting with the founder of Kiama Council's 'Ok Organics' program. Notes were taken from this meeting however no direct quotations were used in the thesis. To aid in participant recruitment, various methods have been used to advertise the study. Firstly, the social media post was titled 'At Home with your Kitchen Caddy', in an attempt to attract people who both positively and negatively experience living with their caddy. By interviewing both aspects of 'life with the caddy', this has potentially drawn out any bias. Along with this, a flyer was made with the same title, and given to participants of the Food Fairness cooking class in Kiama. Once a sample size of fifteen had been acquired, semi-structured interviews were conducted in participants' homes. This was used to potentially allow participants to be more comfortable in answering questions which they may feel disgusted, anxious or shameful about (Browne, 2016; Waitt & Phillips, 2016). A semi-structured interview was chosen to be the most effect qualitative data collection method for this study as it allows for partial structure, but also the flexibility of timing and order regarding questions of intimate nature (Dunn, 2016).

#### *i) Generating Data*


Data was gathered by means of semi-structured interviews, and caddy content checks (see Appendix A), inspired by the research methodology of Metcalfe *et al.*,(2012). Considering firstly the semi-structured interviews, these were used to generate rich qualitative data on: how the caddy is organised and managed within the home; and whether and how the introduction of the caddy changed consumption and waste practices (including the broad impacts on the home). To answer these questions, the interview schedule was divided into four parts. The first part helped to set the scene for the focus of the interview. Here, participants were invited to talk about the background to their

experience of the caddy and to discuss ‘display’ and use of the caddy, particularly their reasoning around the placement. This approach was inspired by similar methods taken by Metcalfe *et al.*, (2012), where caddy location is significant due to its disruptiveness of space (i.e. kitchen).


In the second section, participants were asked to reflect on whether their relationship with food waste changed with the introduction of the caddy. As waste is often something that people don’t think about, and can also be regarded with disgust, images were used to make this task more accessible (refer to Figure 2). Since the comparison required participants to reflect on perceptions they may have had more than five years’ ago (before the Ok Organics program), they were invited to select one of three images that best summed up their relationship to food waste before they had the caddy. This provided a ‘focus’ for a set of prompts around their earlier perceptions; and for an easy comparison with the present. It also helped to ‘normalise’ discussion of a potentially sensitive topic (Browne, 2016).

These images shown in Figure 2, reflected the dominant ways in which food waste has been conceptualised with respect to consumers. The first image shows waste as ‘out of sight out of mind’ tapping into the sense of abundance in the post WWII era (Evans, 2011). This is also an anthropocentric mindset that distances human actions from environmental consequences. The second reflect the emergence of waste as a ‘worry or concern’ discussed by Hawkins (2005); and the third, ‘as a resource’ reflects the many practices of reuse, and repurposing that have been overlooked in many studies of consumer society (Gregson *et al.*, 2007a). Having selected an image that best summed up the way the participant related to food waste, they were then encouraged to reflect on their reasons for selecting this image and invited to draw explicitly on their food disposal practices at that time. Recognising that people may have identified with more than one category, additional prompts (see Figure 2) allowed discussion of other perceptions of food waste they may have been held at the time. All participants were asked whether they were composting before the introduction of the caddy.


**‘Out-of-sight, Out-of-mind’**



**‘Concerned or Worried’**



**‘As a Resource’**



- Could you tell me about why you chose this image?
- How did you normally dispose of food waste before you had the caddy?
- What were the main ideas that you had about food waste at that time?
- Do you think any of the following shaped the ideas you had about food waste? School/ University; TV; blogs; news; parents / growing-up; friends; partners.
- Just to check, you never composted or used food waste to feed animals in the home? (you don't need to stick to one relationship group).
- And even though it was largely out-of-sight, out-of-mind/concerned or worried/as a resource, did you have any worries about food waste/ did you generally combine food with other waste?

**Figure 2: Images and prompts used to sum up participant relationships with food waste before (and after) introducing the kitchen caddy into their home**

Moving through section two, as participants became more comfortable talking about their relationship to food waste, prompts were also built-in to encourage reflection on their experiences of sensing (smelling, seeing and feeling) food waste. From this, discussion on related emotions (e.g. disgust, hate, neutral) were discussed. For example, having selected an image that summed up their relationship to food waste after the introduction of the caddy, participants were asked in section two, whether their direct contact with food waste had changed with the introduction of the caddy. The prompts asked participants to reflect on how they *sensed* food waste and then, how this made them feel:

- i. Thinking specifically about the smell of food waste, would you say this has changed? How does smelling it make you feel?
- ii. What about touching food waste; do you think this has changed? How does touching it make you feel?

- iii. How about seeing it? Has this changed? How does seeing it make you feel?

The third section of the interview was based around the ‘caddy inspection’. This involved the removal and stock-taking of the caddy content on a small tarpaulin. The major categories of food waste which were discussed include: skins/peels, leftovers, unopened/unused, and out of date. The participant was then invited to discuss the journey of three or four items of caddy content in terms of why certain items were considered binnable rather than repurposed in cooking or avoided altogether. This technique of kitchen caddy checking – inspired by Metcalfe *et al.*, (2012) – was used to gain a deeper understanding of household binning, ridding and consumption practices; in addition to the ways in which food was designated as waste (i.e. through sight, smell and touch). Included were set questions prompting if and how the caddy is managed in the home. Various discussions on filling, cleaning, emptying etc. were explored.

The fourth section focused on consumption practices of shopping, cooking, saving and ridding. This section asked participants specifically about their current consumption patterns and grocery shopping routines, for example: do you usually do unplanned or planned shops? More importantly, this section of the interview explored whether the caddy and hands-on waste management has changed consumption practices. Throughout the interview process (particularly during kitchen caddy check), observation of reactions to foods’ visceralities were made, and photographs of the caddy were taken, including its location and content (Metcalfe *et al.*, 2012). By coming into contact with food waste, it was anticipated that participants reveal authentic reactions, possibly of disgust and anxiety (Waitt & Phillips, 2016). This was incorporated as a technique to enable participants to discuss what they potentially do not wish to discuss– confronting their waste. To address this confrontation, humour and laughter were used throughout the semi-structured interview in the form of storytelling. This allowed the participants to openly discuss their practices and subjectivities regarding the kitchen caddy, which some may find an intimate subject (Browne, 2016). To thank participants for their time and involvement, a \$15 gift card to Woolworths was provided.

Short demographic questions about household size, structure, gender, age, ethnicity and education rounded out the interview schedule. In all, fifteen interviews were undertaken ranging between 40- and 60-minutes duration. Interviews were recorded with participant

consent, transcribed and anonymised (through the use of pseudonyms). A total of 73,419 words of data were generated.

## *ii) Analysis*

Once interviews have been conducted, they were then transcribed and coded for critical analysis and interpretation. Thematic analyses of the data were achieved through the methods of descriptive and analytic codes, used to aid in the manifest of themes and patterns. As discussed by Cope (2016), descriptive coding was chosen to be used to frame the noticeable trends in categories such as “who, what, when, where and how”, whereas analytic coding built on these trends and revealed connections which lie deeper in the subtext of the data. During the coding process, the following themes were explored: age; gender; dwelling type; household type; relationship to food waste (before and after the caddy); designation of food as waste (and technique of designation) changes to practices (consumption, waste and home-making practices); embodied reactions to food waste and caddy; conveniences of the caddy; the force of compostable liners; everyday composting activities; and waste avoidance practices. These themes were developed through the conceptual framework of this study, and further built upon during empirical analysis chapter writing.

Acknowledging that there is a gap in research on the disruption of the kitchen caddy, this study has operated with the methodical approach of grounded theory but has incorporated aspects of ethnography to investigate homes in the Kiama Municipality (Cope, 2016; Winchester & Rofe, 2016). I chose to use grounded theory as this project requires me to explore current trends, and potentially allow for theories to be uncovered from the empirical data. In addition, aspects of ethnography (through home-visits) allowed for the thorough research of participant behaviours regarding food waste in their home (Winchester & Rofe, 2016). Qualitative data has been used to understand what happens when households use and manage a kitchen caddy in their everyday life. Recognising the role of disgust and shame (and potentially other emotions, such as pride, anxiety or hate), the research methods pay particular attention to the embodied reactions of coming face-to-face with food waste (Waite & Phillips, 2016). The research also takes a focus on understanding household consumption practices, and other food waste practices (i.e. home composting activities) (Evans, 2012b; Turner, 2018). These aspects have been

investigated with the assistance of the stakeholders: Kiama Municipal Council; and Food Fairness Illawarra.

To retain rigour in this research, I incorporated the Hermeneutic Research Circle and Rigour Checks. This involves: comparing my interpretation of data with others, continuously checking my research with my supervisor and other academics and check with participants during the semi-structured interviews that misinterpreting of information has not occurred (Stratford & Bradshaw, 2016). This is a significant process of the study as it ensures credible and accurate interpretation of the data, allowing for organised academic concepts to be formed.

### 3.2. Limitation to the Research Method

Although this research method was successful in many ways, various limitations made themselves known during the data collection and analyses process. Clearly, for each participant, food waste or ‘scraps’ may have been defined differently. In an attempt to get a formulated idea of this, during the kitchen caddy check various categories of typical bin content were used (peels, leftovers, never opened, and out of date). It was clear after the first 3-6 participants, the method of delving into each item of the caddy individually brought about an issue of distinction between items of waste (e.g. edible and non-edible or peels and leftovers etc.). This meant participants had difficulty to ‘stick with’ each distinct category during discussion. Instead, the latter kitchen caddy checks focused on two or three key items and their journey to the caddy. Additionally, when asked about previous experiences, particularly perceptions of food waste before the kitchen caddy, some participants struggled to remember past approximately five years ago (when caddy was introduced). Ideally, this could have been avoided if the study was conducted during or soon after initial caddy release. Lastly, recruitment was quite difficult with a slow response after each online post. Attending a workshop improved recruitment, although from this, average participant age was relatively high (>60 years). It is also possible that those participants who were already interested in food waste and consumption were most attracted to the study and this may have led to an over-representation of those who were already concerned about or practising strategies of composting.

## Chapter 4: Before and After the Kitchen Caddy

With the rise in municipal composting schemes globally, researchers have increasingly explored the ways that residents interact with kitchen caddies. As shown by Metcalfe *et al.*, (2012), the caddy has considerable agency in ‘calling’ residents to engage with, consider and manage their household food waste. However, the presence of the caddy is not always welcome in specific spaces (e.g. kitchen benchtop), even though kitchen caddies are seen to generate new awareness of food waste as an environmental issue. It is in those moments that new, and perhaps more sustainable relationships with waste can emerge. Drawing on semi-structured interviews with 15 participants and 1 council officer, in New South Wales’ coastal Kiama municipality, this chapter argues that the agency of the kitchen caddy, regarding environmental awareness raising, is shaped by a number of influencing factors.

Within some households, food waste was considered ‘out-of-sight, out-of-mind’, and the introduction of the caddy led to their reclassifying food waste as a resource – something with a purpose to be redirected and reused. However, participants who already used food scraps for composting activities prior to the introduction of the caddy reported no change to their environmental perceptions. The chapter thus highlights the myriad of ways in which food waste is understood by households and the diverse practices of composting that already characterised the coastal area before the caddy was introduced. The data suggest that many households are at the forefront of sustainable waste management practice and that the kitchen caddy is ‘catching up’ with their environmental practices. At the same time, among those who had previously regarded food waste with concern or worry; the caddy offered relief, as they came to see their participation in municipal composting as a more environmentally sustainable option than continuing to bin food to landfill.

To investigate the history of perception and awareness amongst participants, three categories were developed for the participant to associate with and were then asked how they felt about food waste before and after the arrival of the caddy. These categories include: ‘out-of-sight, out-of-mind’, ‘concerned or worried’, and ‘as a resource’. Each category had a corresponding image which was used to potentially encourage memories. This was a crucial method in the interview as the caddy was introduced to residents (in



most municipal areas) over 3 years ago; so, each image contained follow-up prompts to explore the caddy histories. Table 1 displays the results from all 15 participants of this study. These categories were chosen to reflect the ways perspectives of food waste have been discussed in previous literature. They were designed to bring human-environment relations into focus. This is significant as such insights can underpin sustainable household practices and lifestyles. Thus, this thesis holds similarities to Metcalfe *et al.*, (2012) – through understanding what the caddy is enabling in the home. However, unlike this, the thesis is interested specifically in how the caddy is influencing and enabling residents in terms of conceptualising themselves in relation to waste.

Firstly, the ‘out-of-sight, out-of-mind’ category reflects the way that waste is regarded in consumer society as encouraged in the mass production of generic foods and an anthropocentric viewpoint that disregards the environmental impacts of food waste directed to landfill. As Hawkins (2001) argues, sanitation and waste became clearly defined in and through the modern home, as shit is transported away from the residence. Like food waste, it is stated that shit is transported away from the home and into the public domain to be managed – keeping its visceralities and secrets out-of-sight and out-of-mind of households. This is associated with the consumer society and anthropocentric views as it suggests households should not be required to manage their own waste, whether that be shit or food. Secondly, the ‘concerned or worried’ category reflects the growing evidence that people have some concern about food waste. In a study of household attitudes about food waste, Baker *et al.*, (2009) for instance suggest that 83 percent of Australian households hold some level of concern regarding wasted food which comes from the guilt of binning. Lastly, the ‘as a resource’ category explores the shifting idea of waste as valuable. This category presents waste as non-fixed, but rather changing over time, similar to themes presented by Hawkins (2011). We can see that with greater awareness and globalisation of environmental issues, researchers have drawn attention to the diversity of everyday environmental sustainabilities which are practiced by household’s (Head & Muir, 2006; Waitt *et al.*, 2012). This connects to the idea of the caddy being an object associated with environmental practices, but more specifically ridding.

**Table 1: Perceptions of food waste before and after the arrival of the kitchen caddy**

	Before			After		
Participants	Out-of-Sight, Out-of-Mind	Concerned or Worried	As a Resource	Out-of-Sight, Out-of-Mind	Concerned or Worried	As a Resource
Ava (51yrs)	•					•
Carol (60yrs)	•			•		
Evelin (54yrs)			•			•
Martha (65yrs)			•			•
Lisa (68yrs)			•			•
Sarah (60 years)			•			•
Sam (23yrs)			•			•
Betty (71yrs)		•				•
Sandy (50yrs)			•			•
Chrissy (56yrs)			•			•
Greg (47yrs)			•			•
Hannah (82yrs)			•			•
Kylie (55yrs)		•				•
Victoria (44yrs)		•				•
Annie (63yrs)		•				•
Total	2	4	9	1	0	14

Table one shows that notably, most participants previously perceived food waste as a resource prior to the introduction of the kitchen caddy. It was with its introduction that all, bar one participant (Carol), changed their viewpoint of food waste to ‘as a resource’. With a focus on the initial and changed perceptions that were found, this chapter will set out the ways which the caddy facilitated and/or reinforced existing perceptions of food waste.

#### 4.1. 'Out-of-Sight, Out-of-Mind'

Amongst the participants interviewed, there were only two who considered food waste as ‘out-of-sight, out-of-mind’ before the caddy entered their home. These were Ava (51 years) and Carol (60 years). Drawing firstly on the example from Ava, who lives with her husband and daughter in a large house with a grassy backyard; the category and image of ‘out-of-sight, out-of-mind’ resonated strongly in her perception of food waste before having the caddy. She simply explains:

"Yeah, we were this one [out-of-sight, out-of-mind]. In the bin, in the truck and see you later [laugh]. Not sure where you're going, but it's all good [laugh]"

This quote clearly demonstrates the anthropocentric views which are present in the 'out-of-sight, out-of-mind' category. For instance, the 'out-of-sight, out-of-mind' category represents a particular relationship with waste that is associated with 'consumer society'. This builds on the work of Gregson *et al.*, (2007a), and Evans (2012a), through their understanding and investigation of a 'throwaway society'. However, it is Hawkins (2001) who notably connects the mundane events within a household, to the perception of out of sight, and out of mind through its collection and transportation services. With this, we can see that on these occasions, Ava was more concerned about herself being comfortable in her environment and household space, than the waste she produced.

Carol similarly selected 'out of sight out of mind' reflecting that her age may have caused her to take less interest in concerns of food waste, suggesting that changes in the way society regarded waste (such as recycling) were more significant to younger generations. Carol lives with her two adult children (36 and 34 years), who she believes may be more vigilant of sustainable practices than herself. She explains that she no longer drives a vehicle, and instead her children have acquired the responsibility of transporting her to and from certain locations (e.g. the local grocery store). Interestingly, Carol is the only participant of this group to remain 'out-of-sight, out-of-mind' after the introduction of the caddy. However, it should be noted that her household do use the council provided kitchen caddy on an everyday basis. When asked if she currently has any concerns about food waste, she explains:

"No because I guess I think it breaks down. So even if it goes into landfills it is breaking down into the earth. I do have concerns about the plastic and stuff and concerns raised around that. But as far as food waste I just think it breaks downs so what is the problem"

The reason for disinterest in food waste comes from Carol's belief that food waste will 'break down' into the earth while plastics will not. To some extent, Carol's expectation that the earth will ultimately accommodate human food waste, without further effort, upholds an anthropocentric viewpoint, whereby food waste from humans have insignificant effect on the earth. However, this is contradicted in relation to recycling in the above quote and suggests that perceptions of the human impacts on the environment can be inconsistent and uneven. To a small extent, however, it could be suggested that she is more aware of other people's concerns of food waste now with the introduction of the caddy and discussions with her children. It may be disinterest in the topic, previous negative experiences and generational circumstances that were the causes for Carol to

state: "I was happy putting it [food waste] in the red bin. I'm not that in love with it [the caddy]". This statement suggests that for Carol, the kitchen caddy has not generated any greater feeling of concern, attachment or awareness towards issues of sustainability and food waste. This suggests that the agency of the caddy does not necessarily produce a greater awareness of our roles and responsibilities of being environmental stewards.

In contrast, Ava indicated that after the introduction of the caddy, she came to see food waste 'as a resource'. Initially Ava, like Carol, was opposed to the idea of the caddy. She discussed her unwillingness to use the caddy during the initial stages of integration, stating: "I didn't like it. It was hard... I didn't like that it was dirty". Similar to findings from Metcalfe *et al.*, (2013), Ava expresses her dislike of the kitchen caddy because it was dirty, further reflecting her perceptions of food waste itself as dirty. A shift in perspective occurred just after the caddy's introduction when the practices of her friends inspired her to begin using her food waste for other purposes, by responding to her complaint of dirtiness with the suggestion that she start a worm farm. When asked about the time she started to consider her food waste, Ava responded:

“... friends would say they have a compost bin and they put their food waste in there and I say, “Oh I should do that”. That kind of stuff.”

It was only after starting the worm farm that Ava claimed to be more concerned about her food waste. Her awareness also shifted with the continual use of the kitchen caddy, and the addition of compostable caddy bags. This is evident when Ava was discussing the workshops provided by the council: “They told me about the green bags [compostable liners] because I didn't like the caddy”. For Ava then, the caddy made a set of demands on her not unlike the participants in Metcalfe *et al.*, (2012) who began to accommodate their caddy. While the bin was confronting, and categorised by Ava as dirty, this sparked a wider discussion on the topic – which then led to other discourses on using alternative waste practices (worm farm). It was through her efforts to domesticate the caddy that her perception of food waste changed: she began to see it as ‘a resource’. We can see that these participants had significantly different perceptions of food waste with the introduction of the caddy impacting these insights. While Ava and Carol's experiences of the caddy point to its uneven agency in shaping perceptions of food waste, they were the only two participants in the study who regarded food waste as ‘out of sight out of mind’. As Baker *et al.*, (2009) point out, there is widespread concern about food waste in Australia. As shown in Table 1, four participants considered food waste to be a ‘concern

or worry' prior to introduction of the caddy. The following section examines those who chose the 'concerned or worried' category and the reasoning behind this.

#### 4.2. 'Concerned or Worried'

Some participants, knowing the impacts which food waste have on the environment, associated food waste prior to the caddy with the 'concerned or worried' image. In total, there were four participants who identified with this category before the caddy was introduced to their home. Importantly, all four identified food waste as a resource, after its introduction suggesting that the caddy triggered new ways of thinking. Victoria (44 years) works from home, lives with her husband and are a child-free couple. She was one of the participants who felt concerned about food waste going to landfill before she had the caddy, confessing: "well it wasn't something I did anything about.". This quote represents a common theme among the four participants, who despite some level of awareness and concern about food waste – were not acting on this concern by developing more sustainable practices regarding food and consumption. The awareness-action gap can be explained by a number of contextual and perceptual factors. Annie (63 years) for instance, believes it was her work life, limited backyard space, and cleanliness which stopped her from setting up a compost, worm farm or other food waste reduction practices. Annie states: "it did sound wasteful, but I used to work and so composting wasn't something I wanted to get into. I found compost bins outside bring lots of flies and vermin. We also have a tiny yard".

Like Annie, Betty (71 years) who lives with her roommate (57 years) in a standalone house with a small backyard, suggested that she did not have garden space to be involved in composting activities before the introduction of the caddy. A similar lack of resources for composting led Kylie (55 years) who lives with her son (17 years) in a semi-detached dwelling with a courtyard; to improvise with existing waste infrastructure. Concerned about food waste before the arrival of the caddy, Kylie would include food waste with green waste to alleviate her concern:

"I used to put stuff that wasn't allowed to go in the green waste [food] in there previously because I knew they were composting it so what difference does it really make... I used to slip the odd thing in the green waste that shouldn't be there officially. It would have all gone in the same place"

Although these participants had a level of environmental consciousness, elements of space, time and cleanliness of everyday life interrupted their ability to follow through with sustainable practices concerning food. Waitt *et al.*, (2012) addresses this when discussing the limits of pro-sustainable behaviour, even amongst those who believed themselves to live pro-environmental. Unlike those for whom food waste was ‘out of sight out of mind’, concerned participants were already aware of food waste, before the caddy was introduced. Kylie for instance states that most of her food waste would go into the general garbage for landfill and this made her "cranky". This suggests that food waste has already registered for this group as a problem, as something that was already disruptive.

For all the ‘concerned’ participants, after the introduction of the caddy they viewed food waste as a resource. This is best seen in a quote from Betty:

"You feel better about the environment and like you are doing something... I know it's going somewhere worthwhile"

Critically, it was not simply the introduction of the caddy, but the education campaign developed by council in relation to the caddy, as well as other media around food waste in the last few years in Kiama, that participants’ felt changed their viewpoint. As discussed with a member of council, Kiama municipal residents had the opportunity to gain information and education via: one of six Community Information Sessions (per waste zone) during the implementation stage; and Shop Front Information Kiosks (per waste zone) during one week before commencement, and one week after (Kiama Municipal Council, 2017). Evidently, Betty was very supportive of the changes made by Kiama Council with the introduction of the ‘OK Organics’ program and the kitchen caddy. Her change in awareness of food waste and its impacts came mostly from her education via council workshops, along with watching television programs such as 'The War on Waste' developed and screened by the Australian Broadcasting Corporation (ABC). Annie shows comparable qualities here when explaining that council-run workshops were the most influential factors in shifting her perspectives, attitudes and values of food waste. As she further explains: “I can see the benefits... and compost for the garden coming back to you, and that it is going to be used in other sources so it’s a benefit”. This sense of the caddy creating some ‘benefit’ reverberates through Betty's emotional response of ‘feeling better’ from the above example.

The most obvious difference found in this category was from Kylie, who as a child explains living in an extremely resourceful household. This played a significant role in developing her values and awareness of food waste, and she explains other elements (e.g. television or workshops) did not contribute greatly. Importantly, Kylie states previously she would think: “marvellous, let's get that composting so we can get it onto the garden as fertiliser”, whereas now she says, “I just think it's going somewhere useful”, hinting at her current perspectives on the topic. This illustrates the idea that Kylie was more concerned about the food waste when having to handle it and deal with it without the use of the Ok Organics service. We can see now that there is a greater sense of convenience for Kylie, but more notably, this convenience has translated into the ‘as a resource’ category quite discreetly. The next section of this chapter will analyse those who specifically chose the ‘as a resource’ category.

#### 4.3. 'As a Resource'

The most frequently chosen image amongst participants, in terms of their perspectives of food waste before and after the introduction of the kitchen caddy, was the ‘as a resource’ category. This section builds on Gregson *et al.*, (2007a), and their understanding that households are not mindless consumers. In fact, it is suggested that many techniques are used for extending the life of materials. In this section we can see that participants already held this ideal, as presented by Gregson *et al.*, (2007a). It suggests that some households are already moving towards a sustainable future in terms of how they perceive food waste, and resoundingly, many households are doing this without the assistance of government agencies. This therefore illustrates that in terms of household sustainability, government policies are behind on individual household movements.

Some participants presented strong environmental subjectivities through the belief that unconsumed food has a purpose and can avoid landfill. In comparison to the other categories displayed above, these participants all held similar perspectives and levels of food waste awareness. Along with this, all the participants in this category, prior to the caddy’s introduction, undertook some form of home composting, and interestingly all participants (prior to the caddy) lived in a home with a backyard (ranging from small to large in size). Looking firstly at environmental subjectivities before the caddy, Hannah (82 years) discusses her ideas on the ‘as a resource category’:

“... you only have to walk around to see all the plastic and food waste that gets around... and we can just do this [points at ‘as a resource’ photo] and make your garden productive, but again you’ve got to have the will to do that, and space. We were lucky enough to have space”

Hannah lives alone in a duplex with a small garden. She states above that having garden space and the ‘will’ to make a productive garden is an answer to minimising household food waste. Although this is not specifically stated from other participants, it is suggested in numerous ways. For example, Sam (23 years) lives with his mother and two siblings in a single-standing house with a large garden. He explains that his siblings (12 and 25 years) “don’t understand the impacts of the food waste”. Sam, however, presents a strong environmental subjectivity through his commitment to sorting and repurposing food that is waste via composting, and explains this through his appreciation for his garden and home compost.

Valuing gardening and home composting was also evident with many other participants. For example, Martha (65 years) also refers to her garden when explaining why she chose the ‘as a resource’ category. She states: “... I know we need to sustain good gardens and if things are living then why not help them along with recycling waste, especially if it goes back to the soil”. This was also seen with Sandy (50 years), who’s first response to the ‘as a resource’ category is directly associated with her garden, and her awareness that “what does go out [of the soil] comes back in”. Sandy lives in a single dwelling with a spacious backyard, and throughout the interview refers to her participation in gardening when asked how she feels about food waste. Interestingly, before the caddy, Sandy did not use a home compost bin for her food scraps, although the composting method was applied, she explains: “I just threw it in the garden...worms would come... and then vegetables would grow”. This is interesting as it is an uncommon, although successful, way to dispose of vegetables and other food waste to produce.

For many participants, the cause of strong environmental subjectivity came from specific social relationships, such as with family, growing-up and friends, which influenced perspectives and awareness levels. Within previous categories, participants were often influenced by certain factors after the introduction of the caddy, which encouraged them to shift categories. However, this was not the case with the pre-caddy, ‘as a resource’ participants, as they mostly had intrinsic values, perspectives and subjectivities of food waste.



Looking at the contribution of family beliefs and practices in shaping perceptions of food waste before the introduction of the caddy, Chrissy (56 years) and her husband Brian (61 years) simply explain how family values have shaped her food waste perspectives:

C: ...we both grew up in families that taught us that it was a resource... I think we have quite strong environmental beliefs, so we try and run a household that is environmentally friendly

B: It's a resource [food waste] and it feels wasteful to just throw it away.

The couple showed strongly developed environmental subjectivities, and the cause of this was undoubtedly the way they grew-up and the perspectives and values which their parents had taught them. This followed them through to adulthood and shaped their ethics of waste. Chrissy and Brian explain that they have been home composting for over 30 years, and the introduction of the 'Ok Organics' kitchen caddy had not effected them to a great extent as these environmental perspectives were already deeply imbedded into their lifestyles. They were previously using a smaller caddy to transport their food waste into their compost (see figure 12). This is similar to Sam's circumstances before having a caddy.

Lisa (68 years), also expressed that her family and components of growing-up played a significant role in how she viewed and valued food waste currently. For example, she explains: "my mother was very good at not wasting things". Along with this, a significant contribution to her awareness of food waste now comes from where she grew up, which for Lisa was on a poultry farm. This meant that from an early age, Lisa understood the value of food and ways to minimise waste. Along with this, Evelin (54 years) explains of her lack of knowledge surrounding food waste and its concerns when she was in her early 20's, until meeting her now husband Peter (56 years). When asked if his parents taught him to compost, Peter explains:

"Yes, and their parents did the same. It was just the family thing. They always had gardens and vegetable gardens and compost to feed it and that's just the way we have done things... she [Evelin] couldn't understand why I was composting".

Clearly, Peter played a significant role in shifting Evelin's values, perceptions and awareness of food waste. However, before this, Evelin claimed to be 'out-of-sight, out-of-mind'. Her dramatic shift in perspectives of food waste was quite significant as it

displays the value of education through discourse, in this case between family members, and one's ability to change their mind-set and behaviour.

With increase discourse of environmental concerns, there has been some television programs which approach the topic of waste, for example Gardening Australia broadcasted on the ABC channel (predating 'The War on Waste'). These programs were brought up by multiple participants, however, some participants shared that from watching these programs they were able to gain a deeper understanding and awareness of food waste, resulting in perception change. Looking now at Greg (47 years) who lives with his wife (47 years) and two young children (6 and 12 years) and say they have been worm farming their food waste for approximately 7 years. During the discussion about food waste before the introduction of the caddy, Greg was asked how he might have been educated on food waste. Greg responds:

G: TV programs I would say.

EA: would you say they inspired you to change anything around your home?

G: Yeah, I would say they inspired me to put a worm farm in. Maybe it was Gardening Australia [laugh].

Greg did not discuss being influenced or educated by other factors such as family, growing-up or friends. Similarly, Sarah's (60 years) use of composting, although short-lived, was also influenced by television programs. This is significant as it shows that although people may not have been subject to strong environmental subjectivities during their early life, there is great potential for other components of everyday life to influence and change perceptions and awareness of food waste, for example television programs.

The notable feature of this final group is that the caddy did not change their perception of their relationship to food waste. While it is possible that those who were already composting may have been drawn to the study (see method), it nonetheless highlights the ways that many households are already cultivating more sustainable ideas about food waste, well ahead of municipal composting schemes. It draws attention to the diverse ways in which households relate to waste, and how these approaches are 'passed down'. It provides support for Gregson *et al.*, (2007a) (who debated that people are not simply wasteful). It also shows the diverse sustainabilities that these histories/approaches and big backyards can produce. This point is observed by Head and Muir (2006), who discusses urban environmental sustainability, the boundaries faced by humans and more-than-

human entities – how some Australian Fauna is considered ‘matter out of place’ (Douglas, 1966).

#### 4.4. Conclusion: the uneven agency of the caddy in altering insights of food waste

Overall, the responses in this section suggest that the caddy has most effect in changing awareness of food waste among those for whom there is not enough space (or time) to develop home composting but for whom landfill is a concern. The caddy, and the waste service, minimised the time and space needed to divert food waste from landfill. So even though we can see that the caddy can be difficult to embrace (it’s ‘dirty’ for Ava and unlovable for Carol) it also alleviated concerns to be ‘environmentally friendly’. This created a positive feeling among participants now able to ‘live’ their own values around food waste. Although the caddy was significant among the ‘concerned’ group, it is evident that family practices; television programs; friends; and generational divides were significant factors shaping participants’ perceptions of food waste; and for most of the participants, their environmental awareness was ahead of the introduction of the caddy or council’s program.

This suggests that the bin ultimately entered into households that were already actively managing food waste, commonly through various composting activities. It might suggest that councils can be less cautious about such programs given some alignment between the environmental behaviours demanded by composting, and those already practiced at home. It also suggests that those with backyards may be more amenable to environmentally sustainable practices (Head & Muir, 2006). Despite the readiness of participants to engage with the *idea* of composting food waste (both before and after the introduction of the caddy), the chapter also hints at the potentially disruptive quality of the bins at home – described as dirty, and something you could not love. Whether and how such visceral responses deter participants from integrating the caddy into their food consumption and waste *practices* is so far unclear. Focusing on participants embodied and visceral responses not only to the bin, but to foods’ diverse materialities (including decay) the next chapter turns to this.

## Chapter 5: Household Practices and Embodied Encounters

The previous chapter examined the ways that the caddy shaped people's perceptions of food waste. It focused on how the caddy changed the way people *thought* about their relationship to food waste. It showed that most people participating in the study already saw food waste as a resource: something they could convert to compost and use on their garden. However, among those who were concerned about food waste, the caddy alleviated the worry that previously characterised this relationship. In this chapter, the thesis will focus more explicitly on embodied responses to processes of food-becoming-waste.

In focusing on embodied responses, the chapter draws on Hawkins' (2005) argument that embodied, visceral responses to waste can be important in revealing habits that are taken for granted but that also shape how waste is categorised and generated. This is because the habits and systems of classifications around waste are central to the 'relations between self and the world' (:3). It is only when these habits become 'obvious' that new ways of relating to waste emerge, where potentially these new ways of categorising and identifying food waste may be more experimental and potentially sustainable. Hawkins argues that it is not possible to alter practices of wasting without: 'implicating the self in a process of reflexivity, and without asking people to implicitly or explicitly think about the way they live' (:4). It is these more visceral encounters with materials that trigger this process of reflection. It is in these moments she suggests that our identities and relationships to waste become more evident to us, generating reflections on our habits, identities and values as they become more prevalent.

To examine whether these moments may lead to more environmentally sustainable consumption and waste practices at home, this chapter explores in more detail the moments in the home visits where either the caddy and or the process of food-becoming-waste 'moves' participants. In other words, where participants reported an embodied feeling or sense in relation to the process of food-becoming-waste. It captures the reflection of participants in these moments, including the reflections of the self (and the boundaries between the self and waste), and the actions that follow. While the chapter shows that overall, food waste is felt by participants, ultimately it does not trigger more experimental or sustainable relationships with food waste. Rather, it triggers new regimes

of cleanliness, tidiness and storage as participants seek to stabilise their homes against the intrusion of sights, smells and vermin.

To examine these themes, this section is structured in two parts. The first part focuses on the ways in which the caddy and food waste registered in participants' homes: namely through sight, smell and vermin. In each subsection, attention is also paid to the practices that emerge as participants sought to stabilise their 'control' over their home to reduce these impacts. The second section focuses on two aspects of the 'Ok Organics' program that helped residents in managing these processes drawing out the implications for municipal composting programmes.

### 5.1. Embodied Responses and New Practices of Managing 'Food Waste'

#### i) *'It Is an Eyesore': restoring visual aesthetics through practices of display*

It can be suggested that in the initial moments of receiving a kitchen caddy, a household must choose where they will place the object that stores decomposing foods. The name 'kitchen caddy' itself insinuates that it must be kept in a kitchen rather than other areas of a home. In their study of household engagement with kitchen caddies in Manchester, Metcalfe *et al.*, (2007b) suggest that residents were particularly concerned about where the caddy was placed in the kitchen. They discuss this being not because of what the caddy is, but rather from what it represents (food waste) and how it disrupts cleanliness and order of the kitchen. In examining the way participants negotiated and continue to negotiate the caddy around their household space, evidently, the sight of the caddy was one of the key ways in which the caddy and the food designated as waste was felt by participants.

Across the transcripts, the feeling was one of discomfort regarding household aesthetics, values of home-making, and cleanliness in the home. We can see that the data shows not just the desire to have a tidy kitchen space, but also the disconnection between the process of food-becoming-waste and aesthetically pleasing spaces. We see this when Sarah discusses how space is quite significant, and how she views her caddy being kept on the benchtop:

S: I hate it.

EA: the caddy itself?

S: no, it being there, but I tried putting it underneath [the sink] but it just seemed like you are constantly getting it back up and out, and up and out. But I don't like it there at all... it is an eyesore... I don't like having things up on my bench [laugh]

It is evident that the hate expressed by Sarah shows the importance of the bench as an 'empty space' to her, and the significance of having an aesthetically pleasing kitchen (rid of clutter on the benchtop). While everyday convenience is more central for Sarah than her hate for having objects on her benchtop, the caddy is reluctantly displayed and considered an imposition. Similarly, Ava reveals the feelings of dirtiness through her reasoning of locating the caddy in her smaller sink (as seen below in figure 3): "because it's not visible... and I don't like it under the sink because there might be mice... when it is visible it just feels untidy and dirty". Here, Ava demonstrates the relationships between 'seeing' waste and 'feeling untidy and dirty'. Interestingly, when Ava is not able to see the waste (when placed under the sink) the threat of vermin is discussed. To overcome the feeling of dirtiness and to keep vermin at bay, she keeps her bin in the second sink. This display precariously holds the two feelings of not wishing to see waste, but also not wanting it to be hidden for concerns of attracting vermin in place. This represents food waste completely under surveillance; and it resonates with the point made by Hawkins (2005) that how we relate to waste is about how we keep chaos at bay.



**Figure 3: Ava’s sink area where she keeps her kitchen caddy out of sight.**

The aesthetics of the kitchen caddy (including design features) have influenced aspects of its use and practices of ‘display’. Some participants have explained how the aesthetics of the caddy can impact their everyday life, sometimes causing experimental spaces and practices to emerge as to accommodate the disruption of the caddy. This has been seen in various circumstances, for example: hiding the caddy (e.g. in the second sink); matching the caddy (with the colour scheme of the kitchen); and buying a smaller or alternatively shaped/designed caddy.

This is firstly made clear by Evelin, who notably (unlike Ava) explains her reactions to the aesthetics (e.g. size and colour) of the kitchen caddy, rather than her need to keep watch of it. Evelin uses a non-council provided kitchen caddy for the ‘Ok Organics’ services for purposes of aesthetics:

“I didn’t want it too big. The one the council provides is a lot bigger, so we have been using this one and it’s tiny and it sort of matches the colour of the kitchen [laugh]”.

Here it is evident that Evelin is consciously thinking about what the caddy will look like in her home and decides that the size of the caddy is important. This size and shape of Evelin's non-council provided caddy can be seen in figure 4. With the Kiama Council kitchen caddy being 7 litres, Evelin's caddy is approximately 5 Litres. Additionally, the discrete colour of the caddy was significant to Evelin and her household. This was seen to be a common theme for other participants, and a common trend in modern home designs particularly when understanding the value of colour (Dowling, 2008).



**Figure 4: Smaller, non-council provided kitchen caddy at Evelin's residence**

As mentioned above, the specific colouring of the caddy, along with the design features were seen to impact how a participant not only felt about the caddy, but also how they used and interacted with the caddy. Looking firstly at Carol, when discussing why she keeps her caddy next to her sink it is evident that there is no room in other locations, such as under the sink or in the cupboard. This sparks a conversation about the colouring of the caddy:



C: [the caddy] is the right colour

EA: do you think if it was a different colour or bold in colour, it would be different for you?

C: I would be more likely to hide it because it draws attention all the time.

Clearly Carol is keeping her caddy in its current location due to elements which are making it tolerable to her lifestyle (cleanliness and order) and household space and aesthetics (i.e. caddy colour). This holds similarities to Sam's experience with using the caddy and emotions revealed towards the aesthetics of the object. Sam states: "why wouldn't they [Kiama Council] hire a designer to make it look aesthetically pleasing?". Sam, who prides himself on using the caddy as a 'vehicle' for his compost bin, continues to state: "It's a pretty bog-standard design. If we had space underneath the sink, we would probably keep it there, but we already have two bins underneath the sink". We can see that Carol and Sam register the presence of the caddy and ultimately do not wish to see the waste. This has produced a desire to relocate the caddy to an alternative place, although there is a lack of space.

The discussions of 'look' demonstrates the significance of having empty-surfaces, pleasing colours and bin visibility for the participant's sense of home and self. It is notable that the sense of self that is revealed and reinforced is not established around environmental values, but rather values of cleanliness, tidiness and control. The caddy provokes new practices that reinforce traditional values of the well-kept home (Dowling, 2008; Metcalfe *et al.*, 2012). Similar to Sarah's hate for the caddy on her benchtop as discussed above, Katie states: "It [caddy] lives in the kitchen sink and it's close to where the rubbish goes.... I hate it sitting up on the bench". When asked why, Katie expresses her need for benchtop space and ultimately being uncluttered, however, there is also need for the 'rubbish' (food waste) to be in a specific location which can be monitored. The values of a well-kept home are also addressed by Vivian, as she describes why she keeps her caddy in a drawer along with her other bins: "Because there is space for it, and because it looks neat". Order and tidiness are clearly significant aspects of Vivian's sense of home and self which is governed when using the caddy. These examples build on themes pointed out by Dowling (2008) on the discussion of the growing frequency of house designs featuring trends of minimalism, open spaces and muted colours. The sense of home and self through caddy use can be connected to this as it relates to the way in which individuals and families value the home. Dowling also discusses the perils of clutter and how this may contribute to a disruption in domestic practices. This is strongly associated

with these examples from Sarah, Katie and Vivian – participants who described the caddy as being a disruptive object in their kitchen space. The values and sense of home and self are challenged with use of the caddy although, through using the ‘Ok Organics’ system, they are following environmental practices but aligning it with their own values on home-making.

Looking closely at where participants kept their caddy and the monitoring of the caddy, it was clear that households did not have a common space where the caddy belonged aside from the kitchen. In total, 5 participants kept the caddy next to the sink; 4 placed in the smaller/unused sink; 3 under the sink/in draw; 2 on another benchtop space; and 1 in the freezer. We can see through this data that often, participants have made various compromises in their homes and everyday lives to incorporate the caddy. For instance, the most common place to keep the caddy is in the spare sink (refer to figure 3), therefore, the functionality of that sink is compromised for the ability to have the caddy ‘hidden in view’. This is interesting as it shows the struggles to incorporate the caddy, but also the struggle of whether and when waste should be seen. For some participants there was a tendency for the relocation of the caddy to a discrete area with the arrival of visitors. This is explained by Annie: “I don’t think it [caddy] looks good. If it’s just us it doesn’t bother me. It just goes into the walk-in pantry when people come over”. This is interesting as it shows the dislike, and perhaps shame of having waste ‘on display’ for visitors to see.

ii) *‘It’s Freaking Gross’: containing smell through cleaning and refrigeration*

The caddy also registered with participants through their smell of food waste. One participant who expressed extreme discomfort being in close proximity to his caddy during the interview was Sam. Even though Sam saw food waste as a resource, before and after the introduction of the caddy, his visceral reactions towards the smell and sight of the food waste inside were of disgust. During the caddy check, Sam made a distinct ‘dry heave’ sound. In fact, this is followed by Sam directly stating how he senses the caddy and its contents: “It’s disgusting... the worst part is the smell and the [lack of] cleanliness”. When asked about how he interacts with the caddy in order to clean it, he explains:

“It will typically get rinsed in the sink, but we don’t want to put it in the dishwasher because it’s freaking gross”

Interestingly, for Sam, the caddy is considered to be too ‘gross’ to go in the dishwasher revealing a boundary between waste in the caddy, and what is considered waste on dishes. Sam reacts strongly to the visceral encounters with his caddy and this has resulted in his experimentation and development of cleaning practices to be used. On occasions where the caddy is deemed ‘too disgusting’, he will only clean it outside. Sam states: “I will take it down to this water tank here and I will use rainwater... it just pumps out water really quickly and give it a good rinse. Then if it’s particularly bad, I will fill it up with water and just leave it there and let it soak”. It is clear that Sam has created new cleaning routines to ease his discomfort of having an ‘unhygienic’ caddy. This is why he will now clean the caddy outside, separate from the house and dishwasher. These practices are essential for him to feel he has a sense of order and control over the management of the caddy.

Amongst all visceral encounters with food waste (sight, smell and vermin), it could be suggested that the smell of food waste had the greatest effect on participants and their practices. For example, Carol considered refrigerating her caddy stating: “I have thought about keeping it in the fridge because I think it would keep the scraps fresher, but fridge space is at a premium, so it won’t fit” in an attempt to rid her home of smells of decomposing foods. Another notable example is seen by Ava. Examining the implications of smell and sight, Ava expresses how the caddy and its content makes her feel during the ridding process:

A: it’s in the little green plastic bag but I still hold it away from me when I take it to the bin.

EA: right and would that be because of the smell?

A: yeah and the look because it’s got that wet... and it doesn’t look nice. In my head it’s garbage

Although Ava came to see food waste as a resource, as mentioned in the previous chapter, in the moment where she senses the smell and the look of food waste, it becomes garbage once again. This shows how the conceptualisation of ‘food as a resource’ is unstable and contingent on the viscosity of food as it decays. We can also see that being close to food waste, is something that Ava is compelled to ‘hold away’ from her body. This shows that the smell and sight of waste can cut through her emerging thoughts about food as a resource, resuming its place as ‘garbage’. Even Sandy, who had long regarded food as a resource (before and after the caddy) explains the importance of cleaning the caddy with bleach a few times during the week: “... in summer it gets really stinky and I bleach it...

maybe two or three times a week but in winter its only one or two days”. Managing the disruptiveness of the caddy’s smells and refuse was an important weekly practice in order to tolerate the caddy in her home.

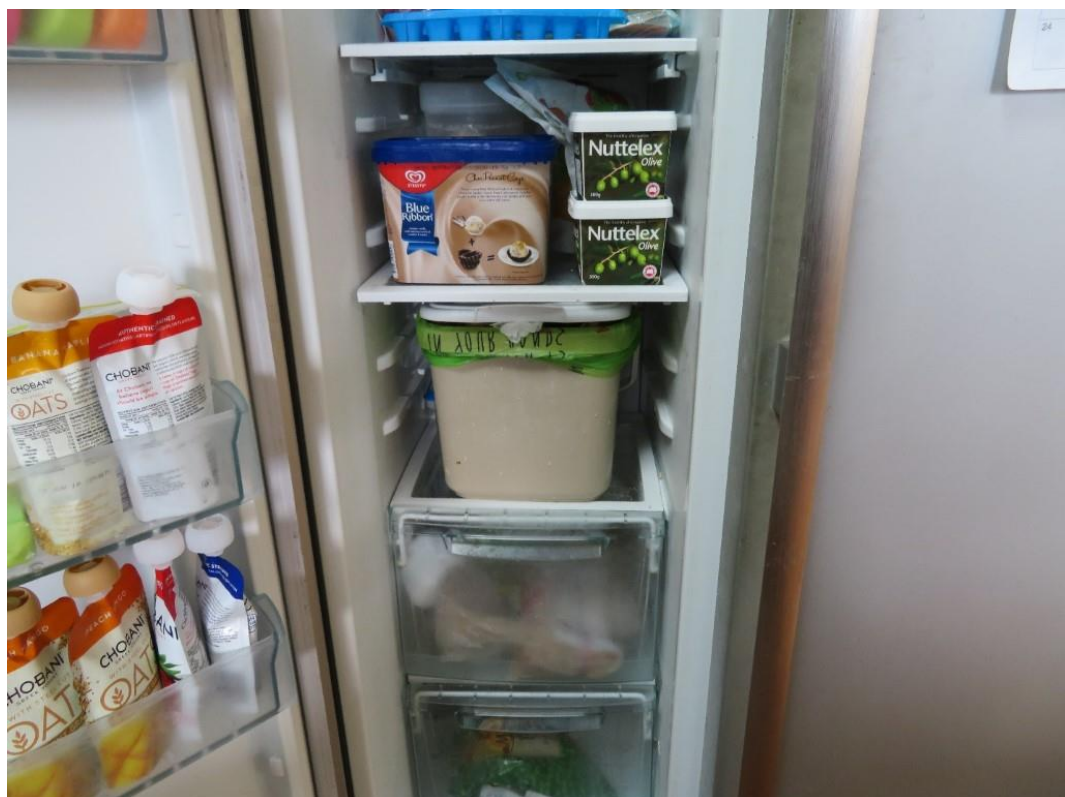
Through analysis it was clear that the practice of cleaning the caddy was a significant, fundamental and valued household chore. All participants discussed having a specific routine which they followed, resoundingly with many participants stating their least favourite aspect of the kitchen caddy was having the clean or maintain it. Amongst these practices there was a variance in cleaning frequency, products used, and time spent undertaking this practice – with 4 participants cleaning the caddy after every empty; 6 a few times a week; 4 once a fortnight and 1 once a month or longer. The purpose for many participants to thoroughly clean their caddy, rather than just rinse with water, was to prevent the smell of decaying foods and build-up of refuse. Through this, a range of new practices were developed, such as: cleaning the caddy outside; multiple weekly cleans; incorporating bleach in cleaning routine; holding compostable bag away from body; and using soapy water. The compostable caddy liners, (introduced by council a few months after the caddies were rolled out) were significant in influencing how often a participant would clean their caddy and was found to ease the participants’ burdens of cleaning and handling. This will be further discussed below with the management of the caddy and food waste.

### *iii) Vermin: containing more-than-human collaborations*

Along with the themes of smell, sight and touch, we have seen that household order and cleanliness are connected to the management of decay. As discussed above, caddy placement seemed, for some participants, to be linked closely with managing this decay, avoiding dirt, vermin and ‘matter-out-of-place’. This draws on the works of Power (2009a, 2009b) on how animals can disrupt a household and force home owners to respond, but also shape everyday understandings of the home and homemaking. The prospect of decaying food to invite vermin into the house or even yard/street filled participants with a sense of disgust. This meant that they sought to limit the agency of food waste to which could attract vermin, including experimenting with new storage methods. This was especially prevalent for Greg and his household who kept the kitchen caddy in the freezer (as seen below in figure 5) with the most significant reason being his dislike for fruit flies that are attracted to the caddy. He states:

“... the fruit flies are a pain and I don’t like them. It feels like there is rubbish in the house in that way, yeah and they obviously can’t get into the freezer. It’s been our best solution and we really like it”

Similar to Ava mentioned above, Greg views certain aspects which may be associated with the caddy as being dirty or unclean. Fruit flies are clearly designated as ‘rubbish’, and this triggers an improvised attempt at control through refrigeration (a point that Katie also raised above). Although vermin were not seen as a significant issue, fruit flies and maggots were occasionally mentioned as a discomfort for some participants, causing a change in certain practices (especially caddy placement and binning), seen here by Greg.



**Figure 5: Greg’s kitchen caddy kept in the freezer due to issues with fruit flies**

In the study, 4 participants mentioned maggots, and 7 mentioned fruit flies causing a disturbance to their home. Annie discusses an experience she had with ham bones which were in the green organic bin. She states: “we woke up one morning, and I’m not kidding, the whole driveway was covered in maggots. I have never seen anything so disgusting in all my life. We are really clean people, so this was disgusting”. This reflects on ways which experience associate with experimental ways of relating to waste. Turner (2018)

suggests that engagement with food's visceralities has been shown to shape consumption in more sustainable ways. These being to position the household around the minimisation of food waste as something else: leftovers, compost, cook-ups etc. However, this account shows that it can also associate with other events: where Annie is disgusted by the viscosity of food, the question is not, unlike Turner (2018) suggests, to subject herself to the surprises of experimenting with food; but rather to ensure a secure boundary between her home and the food. In short, Annie is urged to create a barrier between her home life and the intrusion of food waste by means of securing her home, and properly sealing foods. From this, Annie now takes additional precautions to ensure meat and bones are properly wrapped. For similar reasons, Martha now does not commonly eat meat from experiences she has had with maggots in her caddy.

## 5.2 Managing the Imposition of the Kitchen Caddy and Food Waste

Given the 'work' by households to integrate the caddy into home-making practices, and the effort to domesticate the smells, look, and vermin with the required practices, it is interesting that all participants in the study were still actively participating in the program. While this is a small sample, the broad take-up of the caddy in this qualitative study matches data provided by Kiama City Council at the municipal level that shows the high participation rate and low contamination levels (Kiama Municipal Council, 2017). Part of the widespread take-up could be explained by the sense of relief that some participants expressed in being a part of the composting program. Interviews reveal two other factors were important: the availability of compostable caddy liners; and the convenience of having a bin in the kitchen.

### *i) Compostable Caddy Liners*

Initially with the introduction of the 'OK Organics' program, Kiama Municipal Council did not allow any bags or liners to be used along with the caddy. However, in recent years of the program's progression, the council has accepted, and encouraged, the use of the compostable caddy liners, as discussed for this project by a member of Kiama Council<sup>1</sup>. The council officer explained that, although the use of the compostable caddy liners is not necessary, many residences of Kiama area use the item. This is greatly due to smells

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<sup>1</sup> St John J, Waste Minimisation Officer, Kiama Municipal Council, pers, comm, Kiama, June 15<sup>th</sup>, 2018

produced from the decomposing foods, the caddy cleaning required, and associated convenience. The compostable bags were introduced to resolve complaints made by local residents, where many people claimed they would not use the kitchen caddy as it was inconvenient, but also because of visceral encounters with waste. This correlated strongly with the participants of this study, as 9 used a compostable liner; 2 used newspaper/paper and 4 used nothing.

The compostable liners play a key role in the management of decaying foods, particularly in the concerns of smell, sight and touch. It was also found that some participants would be less inclined to use the caddy if the liners were unavailable. Aside from this, there were some participants who discussed being alleviated by the liners as there was less need to physically touch the food waste. One example coming from Annie: "I don't really touch it. It just goes straight into the bin. I don't really have to touch it. Then I pick up that green bag and then it stays in the bags.". This shows Annie's dependence on the compostable liners, but also how the liners aid in the management of visceral resistance – how the liners ensure the 'Ok Organics' program is manageable for residence and in turn, keeps the process successful. Additionally, Hannah, who uses the compostable liners, explains her cleaning schedule: "It will be done once a fortnight. I give it a wash in soapy water and put it outside in the sun". There was a clear division between the amount of time and effort spent cleaning, depending on how they reacted to the food waste, and experiences they may have encountered. When analysing the cleaning practices of these participants, it is evident that the compostable caddy liners may hold more convenience and time saving value but more importantly, show clear benefits to managing decay.

## *ii) Convenience*

In addition to the compostable caddy liner, the convenience of keeping the caddy in the kitchen provided an incentive for participants to accommodate its disruptive presence. So, while participants felt discomfort from embodied encounters with the caddy, the caddy was easy to use, and this prompted participation. As Martha notes: "I think that the food caddy prompts you more... like you see it there, so you just use it all the time". Notably, as discussed in the previous chapter, originally 9 participants practiced methods of home composting. With the introduction of the kitchen caddy, this number dropped to 4 participants still home composting. A core reason for this is the convenience of the kitchen caddy. This is suggested by Hannah, who held strong environmental subjectivities

before and after the introduction of the caddy. She discusses that due to her age (82 years) and her husband passing, she can no longer home compost, but the kitchen caddy still allows her to. She also discusses her reasons for placing the caddy in the discrete location of under the sink: “access, ease and efficiency”. We can see that using this location is a significant convenience to Hannah and may contribute to her positive associations with the ‘Ok Organics’ program. Additionally, Annie also found the caddy to be extremely convenient to her everyday practices, she states: “it’s just about convenience really, because it’s just there and I can peel just right into the top of it”. These examples convey the message that the kitchen caddy holds great convenience for basic everyday tasks, such as preparing foods and managing waste.

Building on these themes, not only was the caddy convenient to use, but as shown in the previous chapter, alleviated concerns about contributing to landfill: it takes the emotional and practical burden out of food waste. This was evident through discussions with Lisa. Although frequently explaining how strongly she felt about aspects of reducing waste and being environmentally conscious, Lisa also explains how she finds she is “never terribly successful at it... I do waste food but not a massive amount”. The introduction of the caddy however, has proven to make these waste reduction practices easier to approach, resulting in less need for her to home compost. This is further explained by Sandy who discusses using the caddy: “it’s convenient to just chuck it in there and I like recycling things rather than just throwing it all in the red bin... I rather stuff get recycled and made into compost”. In some interviews, it was discussed that the caddy has slightly improved the way in which fridge cleans are conducted. For example, Lisa explains:

"You can put things straight into the caddy, like anything going off - it's a really simple process... even leftovers in jars or in containers you can tip them straight them in".

Through analysis it was evident that a large proportion of participants were influenced by cleanliness and order with regards to where the caddy was placed. However, convenience in most cases offset the negative implications of unclean objects and spaces, which explains why only 4 participants placed their caddy in a more hidden or discrete location. The caddy allows people to be alleviated from pressures of home composting but still be ‘environmentally conscious’. This is clearly a great convenience for some.



### iii) *Gender Dynamics of Kitchen Caddy Management*

With the caddy and its associated management and cleaning responsibilities, it is significant to discover *who* takes the burden of its duties. As we can see, this study is greatly dominated by female participants (refer to Table 1), which suggests various things: women are more likely to partake in waste minimisation efforts, and/or women have commonly been placed with the burden of managing the caddy and thus are more knowledgeable in its workings. This is emphasised in a conversation with Lisa:

EA: Who would you say manages your caddy?

L: Me. Dan [husband] hardly sets foot in the kitchen except to ask what's for dinner.

EA: right, so you are in charge of making sure people use it correctly?

L: yeah well, he does put some stuff in it but often, it is usually me.

This clearly demonstrates the complex gender dynamics associated with the caddy, but also the kitchen space entirely. Lisa has been given all responsibilities associated with food and food waste management. But what is significant is her high environmental subjectivity and overall knowledge of waste management even prior to the caddy's introduction (see chapter 4). Moreover, in some households the load was evenly shared between female and male household members. Some households also designated specific jobs regarding the caddy management to certain genders. For instance, Annie will manage the caddy indoors, but her husband will take it to the kerbside organic bin to empty. It is unclear what truly influenced these dynamic gendered caddy practices, but it can be assumed that preconceived ideologies of gender roles in the home played a substantial part in its construction.

## 5.3 Conclusion: Domesticating food waste

Through the embodied encounters experienced in everyday binning practices, using and managing the caddy participants developed new experimental practices of display, cleaning and storage. Nonetheless, these innovative practices reinforced many boundaries around processes of food-becoming-waste as being tolerated, but unwanted at home. While Turner (2018) has pointed to the ways in which the viscosity of food can drive more sustainable ways of relating to food as it decays (for instance, in changing shopping, cooking and eating practices) the present study suggests that food waste can also be

disgusting, and that this disgust needs to be managed. Resoundingly, domestic subjectivities based around cleanliness, tidiness and dirt were disrupted through the caddy process (e.g. binning, cleaning and managing viscosity), and households had to challenge themselves and innovate and improvise to overcome these disruptions. By doing so, they would be able to successfully participate in a more sustainable practice of municipal composting without their home descending into chaos (Hawkins, 2005). As the challenge of managing disruptions is significant for households with caddies, it could be suggested that councils acknowledge this, and take a greater focus on supporting residents as they grapple with the look, smell, vermin and uncertainty of shifting to more sustainable waste practices. In this regard, compostable bin liners are one example of how councils might support households. The next chapter of this analysis will turn more explicitly to shopping, cooking and consumption practices. Discussion is focused on whether and how the caddy or food waste shaped these wider practices of consumption, and the implications for household generation and designation of food waste.

## Chapter 6: Consumption Practices

The previous chapter focused on participants' embodied encounters with the caddy and food waste. It showed that while participants were 'moved' by these encounters, the uncomfortable moments triggered new practices of containment and control of home-space. This work was important to sustain participation in municipal composting. However, it differs from the creative approaches to consumption examined by Turner (2018). In her study, households' engagement with food's viscerality led to a reorientation of gardening, shopping, cooking and eating practices in ways that minimised the generation of food waste. The 'lively engagement' with food seems to flag a deeper level of environmental sustainability as households organise their consumption practices according to the excess and decay of food.

In order to better understand whether and how the Kiama kitchen caddy shaped wider consumption practices, this section reports on discussions with participants about how food became 'designated as waste' (i.e. ended up in the caddy). It also looks at whether and how the introduction of the caddy and the experience of dealing with and sorting food waste generated new reflections on consumption practices and behaviours; or a change in those practices and behaviours. To develop these themes, participants were invited to empty their kitchen caddy onto a plastic tarpaulin. They were then invited to reflect on the journey of two or three items as they made their way to the caddy. The discussion was open-ended but guided by the interviewer with a series of prompts about each possible category of food (skins/peels, leftovers, unopened/unused, and out-of-date). The results of this kitchen caddy check revealed a broad range of rationales – largely in line with existing research – behind why people did or did not designate food as 'binnable', inedible and compostable.

It was found that with few exceptions however, the consumption practices of buying, preparing, eating, and conserving food did not change with the introduction of the caddy nor did the caddy or encounters with food waste prompt significant new reflection on these practices. In line with this, interviews revealed the entrenched routines and priorities that underpinned the maintenance consumption practices even after the caddy was introduced. Drawing on seven transcripts in detail, the discussions that follow highlight five factors that shape the process of food-becoming-waste: meal planning; viscosity of

food; use buy dates; travelling; and living with children. The transcripts also suggest there was no change to existing practices that delay the process of food-becoming-waste such as preparing leftovers and being conscious of the cost of food.

### 6.1. Meal planning

Looking firstly at Carol, Figure 6 reveals the content of her caddy: a mix of lettuce, half a lemon, multiple uneaten scones, cauliflower and leftovers. Reflecting on her designation of the cauliflower as 'binnable', Carol explains that "I do a fortnightly plan before I shop, and I knew I wouldn't be eating cauliflower in the next week, so I knew I didn't want to keep that". As Carol enjoys having structured and organised meals, and dislikes consuming the same foods frequently. As per Carol's meal planning (Figure 7), she evidently enjoys creating a different meal every night. This method of cooking is incorporated to keep herself and other family members satisfied and is an expression of care. Carol was the only participant who created an in-depth meal planner to assist in food purchasing and preparation. Carol explains her strategy in the following statement:

"So, they are only dinners, and so for next fortnight that will show what we had last fortnight because I don't like to give them [household members] the same thing every night. So, if I am having veggies one night, I try not to have veggies or erm... like we are having veggies tonight and we really didn't have veggies last night they had those fritters. And we are making hamburgers and chips the night after. Saturday is always take-away [laughs]"

The use of the planner has led to valued foods becoming devalued if they are not incorporated into the meal plan, and excessive amounts of leftovers to be deemed as 'binnable'. This is supported by Evans (2012b) who suggests people do not waste foods because they are wasteful, but because everyday practices disrupt binning processes. Evans also suggests that people often choose between the health and care of their families, and not wasting foods. This is important as it is involved in the social relations of the home, and how household members express 'love and devotion' in association with food (Evans, 2012b: 49). Although Carol follows her own detailed meal planner, she also finds consuming leftovers to be an easier alternative on some days. She states: "Last fortnight we had a leftover night... and I made fish cocktails and that supplemented a bit of the leftovers". It could be suggested however, that Carol is eating leftovers on an occasional night as a means of convenience rather than environmental consciousness.

The introduction of the caddy made no difference to Carol's approach to shopping, meal planning and binning. It was clear that Carol's intrinsic and existing consumption practices and priorities were set in place through the meal planner (shown in figure 7), as a method to deal with the everyday routines associated with food, and to aid in shopping and cooking. The strategy of meal planning was used for many years by Carol before the introduction of the caddy. It is clear that planning and strategising these consumption practices are a significant part of her routine to keep order within the household. However, as stated above, keeping order and expressing care within her household also potentially created the means for Carol to produce substantial amounts of surplus foods, and ultimately limits the value which she places on edible foods.



**Figure 6: Carol's kitchen caddy content**

	Breakfast Dinner	Lunch Dinner	Dinner	Breakfast Dinner
M	21st May Wollongong Chuck Chow Mein	28th May ← Creamy Chick pasta pork	4th June	11th June Pub. Holiday
T	22nd May Wollongong Pork (Wobblers) jacket pot Sour cream veg	29th May 10 Strided Pork spare ribs	5th June	12th June
W	23rd May Lamb chops / kebabs Caul. & cheese & bean fritas corn cobs	30th May Movies Snities mushroom gravy veg	6th June	13th June
Th	24th May Monterey Chicken & veg	31st May Cheesy Penne lasagne	7th June	14th June
F	25th May hamburgers & chips	1st June Curried pawns rice	8th June	15th June
S	26th May T/A	2nd June T/A	9th June T/A	16th June T/A
Su	27th May footy korma mini souls on rolls loaded fries	3rd June footy home Stealtholme	10th June	17th June

**Figure 7: Carol's fortnightly meal planner**

## 6.2. The Texture and Smell of Food: viscosity

Looking now at Betty's caddy content, we can see in Figure 8 a significant difference compared to Carol's caddy above (Figure 6). Most noticeable is the lack of edible food stuff compared to inedible items such as flowers, paper, vacuum dust, tea bags and some vegetable peels. What is more interesting is what Betty has not yet put in the caddy and is waiting to do so for bin night. These being: Greek yoghurt, unopened dip and squishy zucchinis (seen figure 9).

### i) *Sensing Decay and Monitoring Date Labels*

With close connection to Waitt and Phillips (2016), we can see that the practice of fridge cleansing has triggered responses to decaying food. This is sparked during discussions about food which participants sense are rotting or going 'off' (e.g. soft, wrinkly, squishy etc.), and about foods which are deemed past their 'used-by-date' – all of which are considered binnable by some participants. These discussions greatly occurred during the process of kitchen caddy checks, when participants came face-to-face with their waste. However, similar to Waitt and Phillips (2016), this also occurred during the infrequent

occasion in which a participant would undertake a ‘spur of the moment’ fridge clean during the caddy check. A significant example of this comes from Betty as she discusses zucchinis hidden in her fridge (as seen below in Figure 9):

“I bought these [zucchini] last week and then I went away, so by the time I got home they were all sad and squishy.... I must have missed them somewhere in the fridge... that was a bit gross.”

This is quite clearly a visceral response to the event of smelling, seeing, and/or touching food that is decaying (Waitt & Phillips, 2016). Most notably here, we see that Betty is disrupted by the presence and mere existence of these zucchinis in her fridge, which led to her removing and preparing them to be binned. Throughout the interview with Betty it became apparent that she felt strongly about the caddy, the council and about environmental issues – sustaining a high subjectivity. However, it would seem Betty continues to follow practices and habits of ridding food which may seem "sad and squishy", instead of making other changes in her consumption patterns which could lead to minimising food waste (e.g. repurposing foods). Instead, through surveillance of her fridge, she is able to keep on top of other foods which she may consider harmful to consume. It is occasions like this within the study that are quite dissimilar to findings from Turner (2018), who suggested that participants were ‘moved’ by the viscosity of food, prompting ‘playful interactions’ with leftovers (:1).





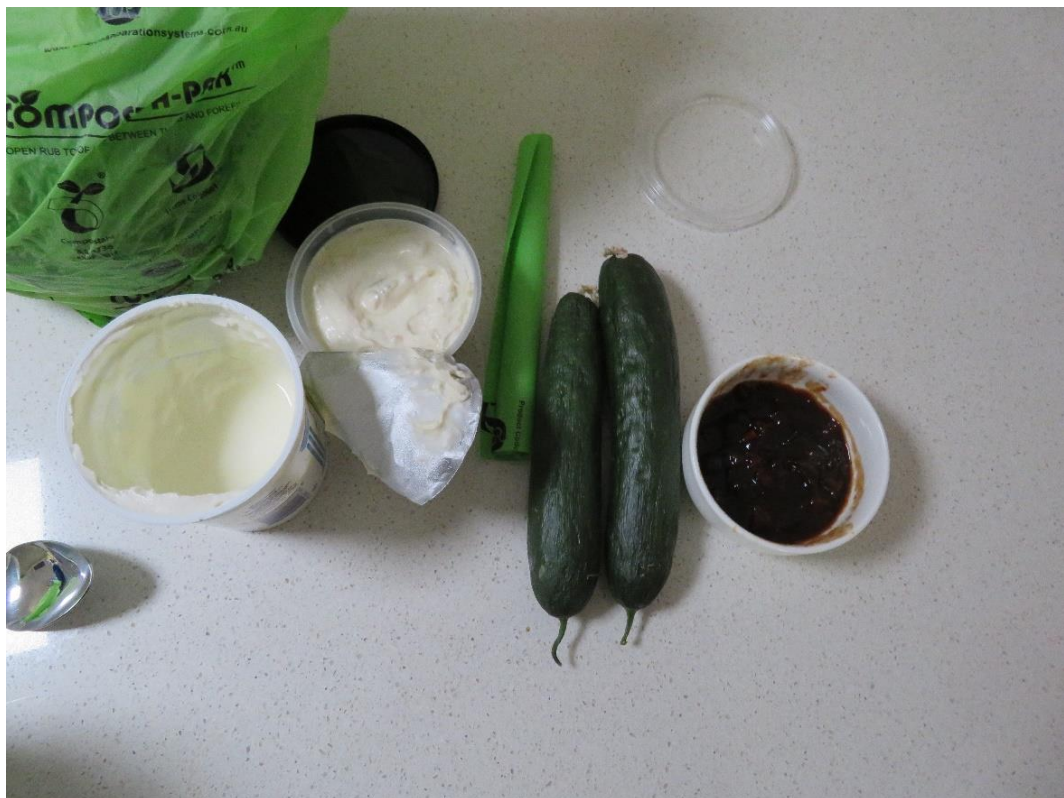
**Figure 8: Betty's kitchen caddy content**

Again drawing on Waitt and Phillips (2016), discourse of foods that participants understood as 'out of date', mostly occurred from reading the date label on the package, but some participants found their senses (look, smell, touch), to be suitable indicators. For instance, Katie monitors the food in her fridge occasionally by sense of smell. Here she is discussion of feta and tofu which has been sitting in the fridge for too long: "if that is stinky next time I open the fridge I will take it out [bin]". On this, Waitt and Phillips (2016), suggest that date labels are significant to the more-than-human aspects of deteriorating foods because they provide a of life expectancy, freshness and condition of the food, addressing anxieties of potential health issues. In this study, there were 8 participants who discussed a food item/s in their caddy being out-of-date. It is Betty once more who provides a notably conversation on how out of date food items are managed in her everyday life with the caddy during a spontaneous fridge clean (see Figure 9). Betty explains:

"...that was bought [unopened dip] and I don't like it. I'm not that keen on onion and no one has used it so it's going too. I just opened it now. I know that it was bought but I don't like French onion so there it sat... [looks at container] it is only just out of date. And I think that [Greek yoghurt] is out of date now.



Interestingly here, Betty acknowledges that certain foods are left in her refrigerator until their expiration date. Waitt and Phillips (2016) explore this concept when discussing how mobility and handling has a significant role to play in the prevention of forgetting food items. Therefore, we can see that Betty places different value on foods which she does not enjoy consuming, although any wastage is still sent to the caddy. When discussing the route which the unwanted and out of date dip will take, she explains: “I will empty it [dip content] into the caddy and that [dip container] will go into the yellow bin for recycling”. This displays Betty’s strong environmental subjectivity, but begs the question: if Betty knew she did not like French onion dip, why did she leave it in her fridge until it was out of date instead of binning it earlier? The answer to this may be – like Waitt and Phillips (2016) suggest – guilt, forgetfulness or potentially the goal to repurpose or gift.



**Figure 9: Foods which are destined for Betty’s caddy after a fridge clean**

As we can see, although participants have strong environmental subjectivities, some are still willing to dispose of uneaten foods which they simply do not like the taste. Drawing on the work of Evans (2012a), which highlights how travel and sense of displacement can outline food provisioning occasions; similar to Betty, Annie explains how travelling has

affected the content of the kitchen caddy (seen in Figure 10). We can see that Annie has binned an entire iceberg lettuce, slices of cheese, bread, slices of tomato and more. For Annie, food is commonly entering the caddy because travelling means her fridge must be cleaned before or after, in order to rid her home of any deteriorating foods. This is explained in the following statement from Annie:

“Well I am going away, and the lettuce was looking ‘tired’. I just cleaned some things out of the fridge that I just needed to get rid of... I just don’t want it here when I come back after a week.”



**Figure 10: Annie’s Kitchen Caddy content after a fridge clean**

This again draws on Evans (2012a), through the discourse of displacement and disorganisation of the refrigerator as a result of travelling. However, it is the study of Waitt and Phillips (2016) on the practices of cleaning the fridge and pantry, that further address Annie’s understanding of the materiality of the lettuce. That being: ‘tired’, and therefore ‘binnable’. In this study, it was common for participants to frequently clean their fridge and/or pantry. In total, 8 participants stating they do so, some specifically because of travel purposes, and others merely for a sense of cleanliness and order (Waitt

& Phillips, 2016). We can see that this is a distinct way for foods to come to be in the caddy rather than consumed, and this practice has not greatly been changed with the introduction of the caddy.

The practice of ridding foods which participants have identified as decaying (or decayed) is connected to the way's households come to understand health concerns, and in turn, how and when food is binned. Close monitoring of 'used by' or 'best before' labels enabled households to manage the risk of health concerns from decomposing food, limits people to govern this by using their senses (Waitt & Phillips, 2016). It is this management of health concerns caused by decaying food which we have seen from the examples of Betty, Annie and Katie above which has sparked regular surveillance of the fridge.

### 6.3. Living with Children

Along with the above examples, lifestyle and household dynamics are significant (Evans, 2011). A key question of this section looking at how these components (i.e. household dynamics) play into the use and management of the caddy; particularly how does one's lifestyle contribute to its use and management? In Figure 11 we see Greg's caddy is full of uneaten pumpkin and their skins, fruit peelings, toast crust, egg shells and paper. Greg's home-life is particularly interesting as he has two young children aged 6 and 12 who often are the cause to why some uneaten foods are deemed 'binnable'. This is consistent with research which suggests households with children are considered to be more wasteful due to unpredicted eating patterns or practices (Evans, 2012a; Schanes *et al.*, 2018). For example, looking particularly at the bread crust in Figure 11, Greg explains: "You can see there is a lot of crust from the boys... the boys don't like crusts. I eat the crusts, so it's from one of them". As this study does not include many households with small children, this is intriguing as it reveals children certainly add extra pressures and disruptions to the waste minimisation efforts set in place with the use of the caddy.



**Figure 11: Content of Greg's kitchen caddy (usually located in freezer)**

Greg also discusses how the complex nature of his household, and having small children bring about everyday dilemmas regarding binning practices and moral decision-makings. In the following quote, we see that Greg is often wasting edible foods in hope to not be viewed as a 'bad' parent. With this, a moral dilemma is brought about regarding the ridding of edible foods, but also about the interpretation of 'good' parenting. Greg explains:

"... half their school lunch comes back. So, whether or not I eat that when it comes back or if it goes into the green bin it just depends. By the time it comes back from school it's kind of, well - it's spent the whole day at school, so you end up throwing it. Then you can't reduce how much food you give them because yeah you can't be seen giving your kids nothing for school."

Clearly, we can see that Greg is troubled by this dilemma which either results in food being wasted, or the potential for his family "giving their kids nothing for school". This specific dilemma is quite significant to the everyday task of living with children, but also



using the kitchen caddy. However, quite notably for Greg, we see that there is a great desire to not be viewed as a ‘bad’ parent.

#### 6.4. Extending the Lives of Food: leftovers and marmalade

While households identified a range of priorities governing the identification and categorisation of food as binnable, they also discussed strategies through which the journey of food to the bin was delayed or disrupted. Like the priorities driving the production of food waste, these strategies did not substantially change after the caddy was introduced suggesting that the caddy, and closer encounters with food waste had very little impact on wider consumption behaviours.



**Figure 12: Content of Evelin and Peter’s caddy (not council provided)**

Figure 12 provides an insight into Evelin and Peter’s kitchen caddy, who have long-standing practices in reusing leftovers. As displayed, the caddy mostly contains coffee grinds, banana peels, vegetable peels and tissues. In this figure, it is clear that the caddy would not be considered clean. However, much like Sam’s caddy in Figure 14, it is

evident that this household may not typically rid foods which would still be suitable for consumption. This is suggested by Evelin as she explains the processes taken when fruits or vegetables may be soft on one side: “we will cut it off and put it in there [the caddy] and then use the other half... we always use the good half and waste the second half”. Evidently, Evelin and Peter do not wish to be wasteful in their consumption practices, and this method may assist them in sustaining a high environmental subjectivity (Evans, 2012b).

Building from this, Evelin and Peter continue to sustain a high environmental subjectivity through consumption practices regarding the use of leftovers. So far, we have seen that the introduction of the caddy has not created a significant shift in consumption practices. One consumption practice which was commonly discussed was using and consuming leftovers. Amongst the participants, 12 discussed always keeping leftovers in the fridge or freezer for another meal, most commonly for the next day. Evelin discusses a common practice regarding using leftovers in the following:

E: we aren't wasteful with the food... we try and use everything up. If the veggies are going a bit sad then they will get put in with a can of tomato and onion and put on pasta. So, everything has a use even though they have used-by dates.

EA: so, you said when something is going sad... what would you say is the definition of something being sad?

E: oh, say it's starting to wrinkle a little bit [laugh], maybe like eggplant. Or maybe if something is changing colour. So, it's not a total waste because they are making compost [through the caddy process], but it is a waste because we are not eating it...

This is a long-standing practice that many households have acquired over time and is not a one which has been greatly shaped by the placement of the caddy in the home. However, moral decision-making processes are significant here as they may determine what household's do with their food waste: dispose the item in the caddy to be made into compost whilst also potentially wasting finances and food, or alternatively find another use for the 'sad' food, resulting in consumption. Alternatively, Evelin and Peter, along with Sandy (who will still “cook for five” people), use the method of over-cooking in order to use the leftovers for meals at work. Peter states: “Sometimes we will deliberately over-cook so that we have leftovers to eat the next day. But whether that is smart I don't

know”. It could be suggested that doing this practice also creates potential for surplus food to be forgotten and later binned.



**Figure 13: Content of Hannah’s caddy**

We can see in Figure 13, that Hannah’s caddy mostly contains inedible scraps including: banana skins, tissues, some blueberries, a lamb shank bone, pumpkin and potato peels, and a rosemary stalk. Although the majority of the foods in this caddy could be considered inedible, Hannah states: “I do eat a lot of skins and peels”, which may be why there is considerably less skins and peels compared to other caddies. In saying this, for some peels (e.g. potato) Hannah will “peel straight over the caddy”, although it is unclear which skins and peels Hannah considers ‘binnable’ and which are deemed edible. From the discourse with Hannah on her consumption practices, we can see high environmental subjectivity and value placed on foods. This is further supported when she discusses her practices of making marmalade with oranges, stating:

“I’m going to make marmalade with that [points to oranges on a chopping board]. With the oranges, I will cut them in half and the juice goes into a dish in the side and then I cut the flesh. It all goes in”

This technique although extremely sufficient for minimising waste, was not affected by the introduction of the kitchen caddy. In a comparable process of rescuing waste and using leftovers, Greg similarly repurposes old vegetables (which would have otherwise been binned) to make stock. Within this empirical chapter, we can see that the caddy has not led to changes in consumption practices in the homes of the participants, although environmental subjectivities still remain high for most participants. In line with research from Evans, we can also see that participants do not wish to be wasteful, however, in some cases lifestyle and family dynamics are the cause of foods to be deemed ‘binnable’.

## 6.5. Cost of Food

In addition to maintaining a refrigerator and responding to food that triggered sensorial responses from its viscosity (being ‘squishy’ or ‘old’), price was a consideration for some participants in shaping the process of food-becoming-waste. Looking at Figure 14, we can see that Sam’s caddy content is made up mostly of vegetable peels, bread crust, egg shells and tea bags. It is evident that the caddy in Figure 14 does not contain substantial amounts of uneaten foods which could be repurposed. This may be because Sam values food and its monetary affiliations. This is noticeable through his discussions of responsibilities regarding purchasing his own food and managing his own food waste, even though he still lives at home. It is clear that Sam does not wish to be wasteful with either his money or food – he states:

"Food is a pretty expensive commodity when you think about it, so when you can minimise your waste, then you minimise your cost... We just don't want to be wasteful because it just seems like you are wasting your money if you are throwing away your food, so why do it. But if you do have waste, use it".

Interestingly, Sam is paying attention to the emotions he has experienced after disposing foods which he did not consume, suggesting that it is a waste of money. Although he does comprehend minimising waste through the practices of consumption, he later reveals: “no, I don’t think it’s [the caddy] changed my consumption rate”. Similarly, Vivian states: “I will always look in the fridge to see what I’ve already got to complete the meal, but that’s not because of the caddy. Although, you are mindful of wasting unnecessarily now”. As we see no change in current purchasing practices, it could be suggested that



perhaps participants would be more moved by concerns of wasting money, rather than the introduction of the kitchen caddy and minimising food waste.



**Figure 14: Content of Sam's caddy**

## 6.6. Conclusion: lack of consumption change

Investigation into the lives and complex consumption practices of the participants of this study, have proven to be significant in a variety of ways. Notably, it is clear that some people are producing food items as a first choice over wasting (e.g. making marmalade), indicating that the minimisation of waste is an active practice in some homes. Moreover, we can see that the caddy has not changed participants' consumption and waste practices. Other household urgencies such as meal planning, removal of foods seen to be past their used by date and living with children were all priorities that did not change with the introduction of the caddy. Indeed, what is most striking from this analysis, is what has *not changed*: buying, preparing and eating practices which incorporate the sustainable lifestyle of the caddy. As we have seen in the various cleaning processes, and other newly

formed practices, participants have adapted to using and managing the caddy in their household space. However, from this we can suggest that participants did not associate the caddy with minimising waste at all points of consumption (i.e. purchasing food, cooking and eating food). Resoundingly, there were no participants (even those with high environmental subjectivities) who believed there were any changes in their consumption patterns and practices with the introduction of the caddy.

## Chapter 7: Conclusion

This thesis has explored the relationship between embodied responses to both food waste and kitchen caddies, and the formation of new, potentially more environmentally sustainable subjectivities. To do so it has focused attention on household practices of consumption, waste, and home-making before and after the introduction of a kitchen caddy. While it shows overwhelmingly that close encounters with food waste have not led to the revision of consumption and waste practices in more sustainable ways; it highlights the work that households do in managing the visceralities of food as it disrupts the ideal of an orderly, uncluttered home as a key components of successful municipal composting schemes. Further, it shows how the caddy provides a sense of relief and convenience that compels households to continue participating in the scheme. These affects and embodied responses are therefore an important part of understanding household sustainability and municipal composting. Just as important as the infrastructure and service itself. These themes are developed further as follows.

### 7.1. Reconceptualising Municipal and Household Sustainability: embracing the ‘yuck factor’

First, while close encounters with food do ‘move’ residents, these encounters may not always lead to the revision of consumption and waste practices. Instead, participants’ discomfort and (at times) disgust at the look, smell and vermin stimulated new practices of binning and cleaning that were developed to contain and control the disruption the caddy made to the home. So rather than allowing the force of food and it’s materiality to shape their shopping and consumption routines as suggested by Turner (2018), the caddy stimulated a set of practices designed to maintain the boundary between the smells, sights and vermin, and human conceptualisations of cleanliness and the ‘good home’. Further, as Evans (2011) already established, the reasons that food becomes designated as waste, often connects to other priorities of maintaining family, work or social relationships. This present study also reinforces the importance of these wider concerns for households.

Indeed, the caddy has challenged the usual depictions of what a household space should exhibit. For instance, it was described by participants as an ‘eyesore’ (Carol) and ‘freaking gross’ (Sam). However, more significantly, due to the negative impacts of

vermin, smells, sights and touch of food as it decays, it turns into ‘garbage’ as it goes limp and becomes ‘wet’ looking (Ava). Clearly, participants were commonly disrupted in their everyday lives whilst using and managing the caddy. Similar findings were discussed by Metcalf *et al.*, (2012) with 21% of the 27 households interviewed, being concerned with issues of hygiene, smell and/or vermin resulting in caution of practices of containment and control during caddy use. However, working with a smaller sample size using images and food waste to help focus questions designed to prompt embodied reactions and/or reflection, this present study has demonstrated that all 15 participants had concerns (often varying) with the issues of hygiene, smell, touch and/or vermin associated with using the kitchen caddy. In addition, it was evident that when vermin enter the home, it created disconnect between the participant, the caddy and sustainable practices due to concerns of hygiene and disgust. For some participants, dealing with fruit flies and maggots caused them to modify the way they used and managed the caddy, often in terms of its location within the home (e.g. Greg and Annie). Many participants were also influenced by the visceral and embodied aspects associated with the handling and ridding processes of food-becoming-waste. For instance, the separation of unused/mouldy foods from containers into the caddy and undergoing fridge cleans led (for some participants) to experience anxieties of visceral reactions and foods unnecessarily being wasted (Waitt & Phillips, 2016). Overall, we can see that food waste is challenging a sense of what is a ‘good home’, and what should be tidy and how a home ought to smell. Simply, participants have been confronted by their waste but have responded to it by trying to separate themselves from it.

Confronting the smell, look and vermin generated by the caddy, did not motivate participants to find new ways to reduce excess food as the gardeners in Turner’s (2018) study did. Rather they were motivated to develop new procedures so that visceral encounters of food waste were limited. This was seen when participants discussed cleaning the caddy and binning its content. Most participants took strict measures to ensure their caddy was kept hygienic and suitable for the home space. This was done by regular cleans with specific products, although some developed ‘cautious procedures’ by additionally rinsing with bleach (e.g. Sandy and Ava). The caddy could be considered a foreign object in the home, therefore thorough cleaning of it allows households to become more accustomed to its presence and management processes. This was also prevalent in the practices of ‘display’ and storage. Many participants ensured that the caddy and waste

could always be monitored; the waste was continuously under surveillance (e.g. keeping caddy in second sink); and the caddy matched the kitchen décor. These are the innovations that were driven by encounters with the caddy and its content. In this, the moment of reflection for almost all participants, related to values of having an uncluttered and tidy home rather than seeing the broader environmental picture of reducing/avoiding waste production.

Unlike Metcalfe *et al.*, (2012) who suggests that households are accommodating to the caddy through its assigned location and the instigated cleansing and binning processes; this thesis shows more explicitly how the work of managing visceral responses is vital to the functioning of the municipal composting process. Significantly, even though people know intellectually that food waste can be a resource, they are still experiencing strong reactions to it in their home: 'I don't love it', 'it's gross', 'it's disgusting' 'yuck'. In turn, the practice of cleaning the refrigeration is not only about accommodating the caddy; it is aiding to restore the disruption which the caddy has created to their sense of self, idea of a 'good home' and perception of what is clean and dirty.

Clearly, we can see a gender division in the study, with a greater number of female participants than male. Although not directly addressed during interviews, it was evident when discussing cleaning routines that the role of women was important in the management of the kitchen caddy and viscosity of food waste. This may be connected to the preconceived ideas of gender roles in the home (specifically in the kitchen), where the caddy has been 'thrown' into the list of household duties of organisation and cleaning that women have traditionally been aligned with. From this, we can conclude that in the home, women may be more likely to partake in the sustainable work of food waste minimisation. However, further research of this would be beneficial, as this may in fact may connect significantly to how the caddy disrupts concepts of cleanliness, order and the 'good home'.

The importance of managing the viscerality of food in ensuring the success of the municipal composting scheme was reinforced with the effectiveness of Kiama Council's introduction of compostable caddy liners. Managing the viscosity of the caddy was disruptive to the household, and this was recognised by Kiama Council who introduced compostable caddy liners. These liners greatly shaped perceptions and use of the caddy. They now act as a protection from the more-than-human aspects of food waste, with many

participants expressing their dependence on them. A member of Kiama Council waste minimisation division also explains that the use of these compostable liners has been promoted within the community. With the increase of food and other organic waste diversion from landfill, the use of the compostable liners can increase the volume of organic waste being averted and improve compost quality. It is also seen as highly favourable to consumers because of the ability to somewhat remove the ‘yuck factor’ and restore the home from the caddy’s intrusion (Rujnić-Sokele & Pilipović, 2017).

At the beginning of this study, the potential for the kitchen caddy to bring residents face-to-face with food waste, and from this, to generate reflections on consumption and waste practices that may lead to more sustainable behaviour was a key question this thesis aimed to explore. While it is clear that the caddy and food waste did ‘move’ participants, and also led to innovation (in managing, cleaning and controlling food’s viscerality) it was evident that consumption practices almost without exception did not change among participants with the introduction of the caddy. Seeing food waste, sorting it, and discarding it did not change how participants shopped, cooked or managed excess food even if it ensured the success of the municipal composting program. Given that the reduction in food waste is one component of household sustainability, the research suggests that the management of viscerality of food – the ‘yuck factor’ – is a key component of household sustainability.

## 7.2. The Uneven Geography of Household Food Waste Practices

Even though the kitchen caddy did not inspire innovation in consumption practices (e.g. shopping, cooking, reusing etc.), its introduction was not the first moment participants thought about their relationship with food waste. We saw that many participants were already partaking in composting activities to some level and had prior perceptions which for many established that food waste was already seen as a concern or resource. However, people were still generally willing to get involved and do the ‘yuck factor’ duties. This is significant as the caddy entered a space of pre-existing perceptions and practices of managing waste. The willingness of participants to use the caddy can be understood in affiliation to these pre-existing relationships.

To elaborate, although the kitchen caddy generated feelings of disgust and anxiety towards the waste, its presence also created a sense of relief. This relief was felt

emotionally, and also practically. Looking firstly at the perceptions of food waste which were present before and after the introduction of the kitchen caddy, it was evident that those for whom food waste had registered as a 'concern' prior to the caddy, were relieved with the introduction of the caddy that they were no longer contributing food waste to landfill – 'I know it's going somewhere worthwhile' (Betty). The caddy and the council service meant that the limitations they found around composting at home (in terms of space and time) were overcome. This is both a practical and an emotional support.

With this benefit, participants were able to abide to the consequences of the caddy (vermin, smells, touch and sight), but it may have also limited further environmental consciousness and practices. For example, some participants felt that by contributing to, and partaking in, the 'Ok Organics' waste minimisation program and using the kitchen caddy, they were sufficiently 'doing their bit' for the environment and could be perceived as adequately 'environmentally friendly'. Gilg and Barr (2005), and Metcalfe *et al.*, (2012) support this claim by stating that further environmental acts are absolved when households believe they are sufficiently doing enough, when effectively only doing minimal sustainable household practices.

With the introduction of kitchen caddy to Kiama municipality, many participants who were involved in home composting activities also terminated these practices in favour of the kitchen caddy due to reasons of alternative convenience of the Council's service. During the interview stage of this thesis, nine participants originally were undertaking composting activities (including composting; housing chickens; worm farming; and/or using soil microorganisms [bokashi bin]), however this decreased to three with the caddy's introduction due to the convenience of the caddy. This sharp decrease highlights the work (and space) involved in being 'environmentally friendly'.

The caddy can be seen as having greater convenience than home composting activities, as the 'Ok Organics' program is set in place to take waste 'off the hands' of households and into the public domain (Hawkins, 2001). From this, it could be suggested that various positive perceptions of food waste were formed during the processes of binning, ridding and interacting with food waste, providing the motivation to do the 'work' of managing the potential for food waste to become disgusting. However, it is important to note, these perceptions and practices were already formed/forming prior to the caddy, i.e. participants already had knowledge, experience and plans in sustainably managing their food waste

through means practices like composting or repurposing leftovers. This is significant, because we know that households have been innovative in this way, so municipal waste minimisation programs can be seen as meeting a demand that was already being met in numerous ways by the household.

This finding is interesting because it suggests that in a context where food waste has negative connotations and value-judgements attached to it, the caddy and Council Service offers a solution to an existing problem of waste. So, even though food waste can be experienced as disgusting, it can force us to reconsider our values and identities. In this case, values of sustainability due to space and time, may not be able to be acted upon by households – which can be more easily expressed. The caddy can also help to resolve an identity crisis around our environmental values. Hawkins (2005) has suggested that when we are confronted by our waste, we are triggered to reflect on our consumption and/or waste practices. While the caddy is not compelling us to rethink our waste and consumption practices, it helps us to accomplish a goal that has already been established, although is one that we possibly cannot achieve ourselves.

In this sense, many households in this study were already aware of, or moving towards more sustainable food waste practices. The caddy was embraced overall, despite its disruptive quality, suggesting that such programs could be well-received by other municipalities where households may already be thinking about or doing the work of repurposing food waste.

### 7.3. Implications and further research.

Overall, this thesis reconceptualises household responses to the ‘yuck factor’ of food waste as core components of participation in municipal composting. This finding has implications for policy and research. Focusing on *policy*, many studies have acknowledged that households have a large role to play in minimising food waste going to landfill, particularly through reducing consumption behaviours and monitoring food waste practices (e.g. Evans, 2011; Waitt *et al.*, 2012; Cole *et al.*, 2014). Although government and non-government organisations have steadily become involved in providing support for households to minimise food waste over the previous decades, what is significantly lacking in programs and policies is the recognition and management of disruption (often in ideals of cleanliness and order) which these program and policies



bring to households. This is seen greatly in the disturbances which became known in the presence of the kitchen caddy, including: vermin; smells; sights; touch; and overall management as set out in this thesis. We have seen that Kiama Municipal Council has taken some precautions (compostable caddy liners) to the manifested disruptions and annoyances of the 'Ok Organics' waste minimisation program. This suggests that councils must acknowledge the 'yuck factor' of managing the process of food-becoming-waste. The study also suggests that policy makers could be less cautious – people have embraced the caddy process – they are concerned about food waste and see its potential to be repurposed – and are willing to do the work.

Future research on this topic could continue to focus on perceptions, practices and visceralities of food waste, while investigating several councils, by comparing those allowing compostable liners, and those not. Additionally, as we know households were already thinking about their relation to food waste, it would be recommended that home-visits and interviews covering more aspects of household sustainability, including food production and waste generation; water usage; and energy use could be beneficial to research. This would assist in further understanding about how households were already innovating prior to waste management strategies and could act as a guide for future policies. Alternatively, research could take a focus on the governance and infrastructure behind centralised composting, examining the management, finances and environmental impact in developing and running the facilities once food leaves the home.

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# Appendices

## *Appendix A: Semi-structured interview questionnaire*

### **1. Introduction:**

- a. I am going to start by clarifying important topics of the study:
  - I want to clarify with you that this study is not aiming to decipher the right or wrong way to use the kitchen caddy.
  - Also, I want to emphasise that the study is about the ways which the caddy fits into your household routine and waste and consumption practices, rather than other elements specifically related to the ‘OK Organics’ program.

### **2. Kitchen Caddy**

- a. How did you hear about the caddy?
- b. Where is your kitchen caddy kept? May I take a photograph of it? (take photograph)
- c. Do you use your caddy specifically for food waste and other organic materials, or for another purpose?
- d. Can you tell me about the decision to locate the caddy here?
  - Did you think about:
    - i. The smell or sight?
    - ii. Vermin?
    - iii. Accessibility to the fridge, or to the street?
    - iv. Food preparation areas?
- e. Can you tell me about the transition experienced after receiving your caddy?
  - [Prompt: was it easy? Did you forget to use it very often?]
- f. What are the best things about having and using your caddy?
- g. What are the worst things about having and using your caddy?

### **3. Relationship to Food Waste: before and after the caddy**

**[Perhaps move to another room or sit down if there's a table in the kitchen]**

**3.1.** Now I want to ask you about how you related to food waste before and after you had the ‘OK Organics’ caddy. So, thinking first about your relationship to food waste before the caddy, which of the following images best captures the way you *mainly* thought about food waste [show laminated sheet]?

**a. Out of sight out of mind**

**b. Concern or Problem**

**c. As a Resource for you or others**

Participants will select one image on the laminated sheet. Then, once they have selected the image, talk them through the following prompts

**a. Out of sight out of mind:**

- Could you tell me about why you chose this image?
- How did you normally dispose of food waste before you had the caddy?
- What were the main ideas that you had about food waste at that time?
- Do you think any of the following shaped the ideas you had about food waste? School/ University; TV; blogs; news; parents / growing-up; friends; partners.
- Just to check, you never composted or used food waste to feed animals in the home? (you don't need to stick to one relationship group).
- And even though it was largely out of sight and out of mind, did you have any worries about food waste?

**b. Concern or problem:**

- Could you tell me about why you chose this image?
- How did you normally dispose of food waste before you had the caddy?
- What were the main ideas that you had about food waste at that time?
- Do you think any of the following has shaped the ideas you had about food waste? School/ University; TV; blogs; news; parents / growing-up; friends; partners
- Just to check, you never composted or used food waste to feed animals in the home? (you don't need to stick to one relationship group).

- And even though you were generally concerned about food waste for the reasons you just said, did you generally continue to combine food waste with other waste?

**c. As a resource for you or others**

- Could you tell me about why you chose this image?
- How did you normally dispose of food waste before you had the caddy?
- What were the main ideas that you had about food waste at that time?
- Do you think any of the following has shaped the ideas you had about food waste? School/ University; TV; blogs; news; parents / growing-up; friends; partners
- Just to check, you never combined food waste with other types of waste- containers, bottles, plastic bags? (you don't need to stick to one relationship group).
- And even though you generally composted food waste, did you have any concerns about food waste?

**3.2.** Thank you for that. Now I want to ask about your relationship with food waste after you began to use the caddy. Thinking of the three broad categories, do you think this has changed since you have been separating food waste? [show the laminated options again].

**a.** Has it changed any other aspect of the way you relate to food?

[prompt if no response – the way you handle it, the way you talk about it with others etc.]

**b.** Would you say through the introduction of the caddy that your direct contact with food waste has changed?

- iv. Thinking specifically about the smell of food waste, would you say this has changed? How does smelling it make you feel?
- v. What about touching food waste; do you think this has changed? How does touching it make you feel?
- vi. How about seeing it? Has this changed? How does seeing it make you feel?



- e. In what ways have you been educated on food waste since the introduction of the 'OK Organics' Kitchen Caddy? Have you attended any local workshops?
  - [Prompt: information sessions by local council, social media, TV, blogs, personal research]
- c. Overall, do you wish you had more insight into the impacts of food waste? [If yes – do you think this would change any aspect of your everyday routine?]

#### **4. Bin inspection and photography activity (emptying caddy)**

Thank you for that. Now in this section I want to ask you a little more about the decision-making process to bin certain types of food. As a prompt for this question, we are going to get even closer to the food! So first let's just tip out the contents onto this tarpaulin. **[move outside to yard or balcony if possible]**

Firstly, we will do a stock-take of the different types of food waste in your bin. So, can you see any of the following? [Talk through one by one. If there are no examples of the particular type of food waste on the list, come back to these at the end]:

##### **4.1. Skins and peels from cooking**

- a. What is the decision-making process of putting skins and peels into the caddy?
  - Are there skins and peels that don't end-up in the caddy? Are there skins and peels that are too disgusting to go in the caddy? How do you determine whether skins and peels will go in the caddy (mould, smell, look)? Do you still consider some skins and peels in the caddy edible?
- b. Is this content similar to what is usually in your kitchen caddy? Why?
- c. Has having the caddy changed the way you think about skins and peels?
  - Prompt: do you conserve more? Do you bin them more readily? Do you consider other uses for them (for cooking etc.)?

##### **4.2. Leftovers**

- a. What is the decision-making process of putting leftovers into the caddy?
- b. Are there leftovers that don't end-up in the caddy? Are there leftovers that are too disgusting to go in the caddy? How do you determine whether leftovers

will go in the caddy (mould, smell, look)? Do you still consider some leftovers in the caddy edible?

- c. Is this content similar to what is usually in your kitchen caddy? Why?
- d. Has having the caddy changed the way you think about leftovers?
  - Prompt: do you conserve more? Do you bin them more readily? Do you consider other uses for them (for cooking etc.)?

#### **4.3. Never opened / used**

- a. What is the decision-making process of putting 'never opened' foods into the caddy?
- b. Are there 'never opened' foods that don't end-up in the caddy? Are there 'never opened' foods that are too disgusting to go in the caddy? How do you determine whether 'never opened' foods will go in the caddy (mould, smell, look)? Do you still consider some 'never opened' in the caddy edible?
- c. Is this content similar to what is usually in your kitchen caddy? Why?
- d. Has having the caddy changed the way you think about never opened/used foods?
  - [Prompt: do you conserve more? Do you bin them more readily? Do you consider other uses for them (for cooking etc.)?

#### **4.4. Out of date (if they can recognise) [NB some of these may apply to never opened- this is ok].**

- a. What is the decision-making process of putting 'out of date' food into the caddy?
- b. Are there 'out of date' foods that don't end-up in the caddy? Are there 'out of date' foods that are too disgusting to go in the caddy? How do you determine whether 'out of date' foods will go in the caddy (mould, smell, look)? Do you still consider some 'out of date foods' in the caddy edible?
- c. Is this content similar to what is usually in your kitchen caddy? Why?
- d. Has having the caddy changed the way you think about out of date food?
  - do you conserve more? Do you bin them more readily? Do you consider other uses for them (for cooking etc.)?

### **5. Caddy Routine**

- a. [If applicable] Who manages your caddy? Do they also decide what goes in the caddy?
  - [Prompt: cleaning, filling, emptying, ensuring appropriate use etc.]
- b. Could you please walk me through the different processes involved in managing the caddy?
  - i. separating food from containers
  - ii. cleaning (products used)
  - iii. filling
  - iv. emptying (frequency),
  - v. ensuring appropriate use etc.]
- c. Is your kitchen caddy lined with anything? If so, why?
  - a. Do you think these different processes of managing the caddy have changed how you feel about food? What about food waste? Can you please tell me why?
- d. Has there ever been a time you have forgotten to clean the caddy? If yes, what happened, how did you feel about it and what did you do?

## 6. Consumption

- a. Can you please talk me through your usual grocery shopping routine if you have one?
  - [Prompt: what food types do you usually get (fresh, frozen, planned shopping, unplanning shopping etc.),
  - how often do you go shopping in a week?
  - on average how much do you spend on food a week? Etc.]
- b. Do you think the caddy has changed anything about your shopping routine (i.e. seeing food waste and separating it out from containers)?
  - a. Has it reduced the amount of food you consume?
  - b. Have you noticed any changes in the amount of food you purchase since using the caddy? If purchasing less food, why do you think this is?
    - [Prompt: sense of awareness, guilt, more hands-on with waste]
- c. Do you ever find yourself / your household throwing away unopened / uneaten foods which are still edible? If yes, could you please explain why you think this happens?

- d. Do you ever find yourself / your household throwing away mouldy / expired food? If yes, could you please explain why you think this happens?
  - [Prompt: don't like the food, don't like eating leftovers, over-buy, health concerns]
- e. [If applicable] Do you find a specific household member/s waste more food than the others? If yes, why do you think this is? Could you please give me an example?
  - [Prompt: any meal times, school lunches, meal preparation, etc.]
- f. Do you have any food saving tricks which you use? If so, how long have you been using them? Has this changed since having the caddy?
  - [Prompt: proper storage, using leftovers, plan meals etc.]
- g. Do you think that the introduction of the 'OK Organics' caddy has helped you / your household to better understand sustainable practices? [If Yes] What new practices have you introduced to your home?
  - [Prompt: recycling, saving water, solar power, composting, public transport]
- h. Do you think that the introduction of the 'OK Organics' caddy has changed how you cook? Could you give an example (i.e. seeing food wasting and separating it)?

## **7. Demographic details**

- a. Clarify participant age (within age range); gender; educational level [high school, tertiary education]; place of birth; include 'prefer not to say'.
- b. How many people live in your household? What are their ages?

**We have come to the end of the interview: thank you for your time and please accept this voucher for your participation**

**END**